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The

BLUE JAY

A JOURNAL OF NATURAL HISTORY AND CONSERVATION
FOR SASKATCHEWAN AND ADJACENT REGIONS

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Photo by R. R. Taylor

Great Gray Owl, East Braintree, Manitoba, December 12, 1968

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SASKATCHEWAN NATURAL HISTORY SOCIETY
Regina, Saskatchewan

SNHS — A CONSERVATION-CONSCIOUS SOCIETY

The recent continent-wide concern about the use of DDT prompted the programme committee of the SNHS Annual Meeting in October to ask me to speak briefly on the subject. Since I had written an editorial on DDT for the September *Blue Jay*, and since I have a BAN DDT sticker prominently displayed on the back window of my car, it was obvious to the committee and to the meeting that I have been following developments re: DDT with interest.

DDT means "drop dead twice." This definition was given just the evening before the meeting, on the TV programme *Laugh In*. During the programme they also gave an award to DDT, "the only spray that kills both sprayed and sprayer." There is, now, real evidence that DDT does kill birds and fish as well as insects, it does endanger the health and well-being of man, and perhaps most important of all, that it can upset the world ecological balance and threaten the survival of us all. We are, therefore, in a box. We need pesticides to help us grow enough food and fibre for an ever-increasing population and to control malaria and other diseases, but we must at all costs also prevent deterioration of our essential environment. DDT may be considered to have some short-term "good" effects, but we can now be sure that the long-term effects are bad.

Naturalists expressed warnings against DDT as early as 1945, and gradually the case against it became stronger. The first really effective case against DDT was made by Rachel Carson in her book *Silent Spring*, published in 1962. You may remember that we published a seven-page review of that book in the December, 1962, issue of the *Blue Jay*. Now (October 28, 1969), the U.S. Department of the Interior has announced that a National Wildlife Refuge, stretching for 40 miles along the Maine seacoast, has been named in honour of Rachel Carson, as a "tribute to one of the greatest conservationists of our time."

Rachel Carson's book had a strong emotional appeal, for it described in dramatic fashion the dangers of DDT and other pesticides. Now more facts are available and it is recognized that any case against DDT must be supported by facts. This year the Saskatoon Natural History Society used this approach and was successful in getting the City Council to stop any further purchase of DDT for mosquito control in their city. Similarly, Pollution Probe, organized by the Department of Zoology of the University of Toronto, prepared such a well-documented case against DDT that the Government of Ontario put an almost complete ban on the use of DDT in that province, and the Government of Canada is introducing restrictions which should reduce the use of DDT in Canada by 90%.

This legislation deserves our congratulations and our support. But environmental pollution problems are not going to be solved by the simple banning of persistent pesticides. When one substance is banned, how are we to prevent a flood of other and perhaps even more dangerous pesticides appearing?

An intensive educational programme is essential. Governments should take this responsibility, but conservation societies such as the SNHS can help. First, we can help to make the public aware of the magnitude of the pollution problem, so that the public will be ready to insist that pollution be regulated, and prepared to pay for the research and control measures involved. Second, as individuals, we can all do something to reduce pollution, including the boycotting of products of companies that do not try to control pollution. Third, as a society, we can work actively on committees (such as the one set up in the resolution passed at the Annual Meeting) to document the facts of soil, air and water pollution, and to make these better known.

Ecologists tell us that the deterioration of our environment is increasing at an alarming rate. This trend must be reversed before we pass the point of no return. As members of the SNHS let's prove that ours is a conservation-conscious society.

SASKATCHEWAN NATURAL HISTORY SOCIETY

BLUE JAY SUBSCRIPTION AND SNHS MEMBERSHIP RENEWAL FORM

Increased postage and publication costs have made it necessary to raise the fee. The Annual Meeting, October 18, 1969, set the following rates:

Regular membership (for all members, including juniors and institutions)	$ 3.00
Supporting membership	5.00
Sustaining membership	10.00

Note: Since the $3.00 membership barely covers operating costs, supporting and sustaining memberships are needed to support special projects. Receipts for income tax deductions will be issued for all amounts above $3.00.

Bulk subscriptions to schools will be $3.00 for the first subscription and $1.00 for each additional subscription to the same address (minimum of 5 subscriptions).

For members in arrears, subscriptions for the two years 1969 and 1970 will be mailed at the special rate of $4.00. New members can receive December, 1969 and four issues 1970 for $3.00.

No further *Blue Jays* to members in arrears.

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THE BLUE JAY

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PRESIDENT'S MESSAGE

by **Gordon Silversides,** 1201 Grace Street, Moose Jaw

We begin the 1969-70 fiscal year of the Saskatchewan Natural History Society in what appears to be an atmosphere of public awakening and a new awareness of major ecological problems. This new awareness places one of the objectives of the Society in a new perspective. The public is being informed by the mass media of the dangers to the natural environment, in what appears to be an efficient and impressive manner. It is only necessary to mention such television programs as "Audubon" and "The Untamed World" (with special mention of the work of John Livingston) to show that the message is being presented very effectively.

There seems to be a trend away from a feeling of public apathy to one of public concern. Raymond Dasmann in his Public Affairs Pamphlet, *An Environment Fit for People*, gives a new definition of conservation which reflects reason for public concern: "a rational use of the environment to achieve the highest quality of living for mankind." Does this not help place new emphasis on our role as leaders in programmes of conservation of natural environment? Individual members of the Saskatchewan Natural History Society, as well as the Society as an organization, can take leadership in efforts to enlist the co-operation of others to seek workable solutions to problems of pollution, problems of disappearing natural areas, problems of species extinction and problems of ecological stability.

ARE WE EQUAL TO THE TASK?

IN MEMORIAM: DAVID SANTY (1888 - 1969)

by **C. Stuart Houston,** 863 University Drive, Saskatoon

David Santy was born August 12, 1888 on a croft toward the tip of the Mull of Kintyre—near Campbelltown, Argyll, Scotland. As the youngest of four, without neighboring children to play with, he roamed the fens and moors, the hills and green valleys. While climbing in the Grampian Highlands, he observed the Golden Eagles—the beginning of a life-long interest.

He emigrated with his parents to Bowmanville, Ontario in 1906 and then moved on to Moose Jaw in 1908. He worked four years for a building supply firm, one summer on his brother's homestead south of Demaine and five years with the International Harvester Company in Weyburn. In 1918 he opened a country store three miles south of the present site of Beechy, moving into the townsite when it opened in 1921. He retired in 1945.

He was very active in community activities, particularly the agriculture society, board of trade, curling club, rink association, B.P.O.E. (Elks) and the fish and game league. He was chairman of the school board, president of the church board and first superintendent of the Sunday School. He was a justice of the peace for many years, undertaker, substitute minister, and he nursed the sick in time of need. For 30 years he was the Beechy correspondent for the Lucky Lake weekly newspaper and his contributions often included notes on natural history and conservation messages.

In addition to his hobbies of gardening and cinephotography, he took a keen interest in wildlife. For about 50 years, he knew of one to three Golden Eagle nests each summer, but did not publicize this for fear they would be molested. I got to know and respect Mr. Santy through yearly visits to band the eagles in the nests he had found. In spite of his years, he was filled with youthful enthusiasm and I well remember on the first few expeditions that even my teenage companions could not keep up with him as he bounded up and down the hills. Between 1960 and 1969, 35 young Golden Eagles were banded in their nests on the cliffs of the South Saskatchewan River.

In October, 1962, Dave Santy was elected a director of the Saskatchewan Natural History Society for a three-year term. His enthusiastic invitation to hold a campout in the hills southeast of Beechy on June 4 to 6, 1964 resulted in one of the most successful S.N.H.S. summer meetings ever held. He was ably assisted by Doug Redley, and these two men donated their full-time labours for at least two weeks to construct a magnificent campsite, complete with limestone barbecues and wooden footbridges, on the river hillside on land owned by rancher member Bill Peters. This was the first summer meeting held away from parks and resort facilities and, due to the inspiration — and perspiration —of Santy and Redley, was an unforgettable experience for all. Mr. Santy had enlisted the cooperation of the entire community to make this possible. (Readers may wish to review Rose McLaughlin's glowing account of this event in the *Blue Jay*, 22:127-129, September, 1964).

The following articles and notes by Dave Santy were published in the *Blue Jay*:

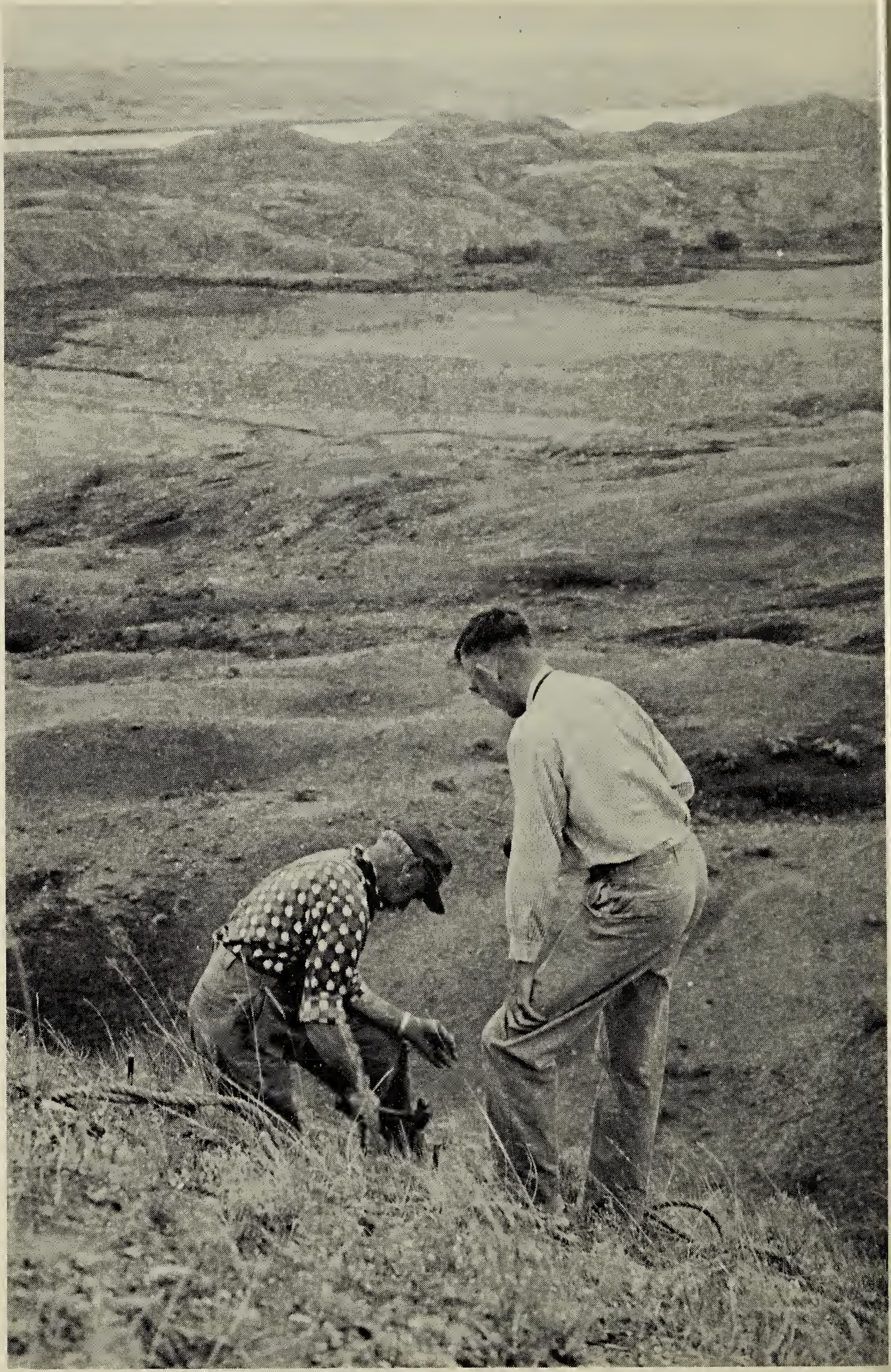
Unusual animals of the Beechy district. **16**:36-37, March, 1958.

Experiences with orphan fawns. **16**: 131-32, September, 1958.

Golden Eagle nesting at Beechy, Saskatchewan. **16**: 151-152, December, 1958.

Further notes on the Golden Eagle in the Beechy area. **17**:151. December, 1959.

Apparent breeding record of Turkey Vulture along the South Saskatchewan River. **20**:14, March, 1962.



Dave Santy country, southeast of Beechy

Dave Santy (with hammer) and Stuart Houston on eagle-banding trip.

Bear and Wolverine near Beechy, Saskatchewan. 21: 119, September, 1963.

Some interesting Lynx observations. 22:35, March, 1964.

A plea for the protection of predators. 23:106, June, 1965.

A young antelope pet. 25:92-93, June, 1967.

His wife, the former Martha Kerr, predeceased him in 1964, the year following celebration of their golden wedding anniversary. He is survived by his three daughters, Mrs. Betty Peters of Beechy, Mrs. Peggy Conway of Burnaby, B.C. and Mrs. June Wright of Kamloops, B.C. and seven grandchildren.

Following years of failing vision and eighteen months of recurrent heart attacks, Dave Santy passed away quietly in the Beechy hospital on August 30, 1969. The memorial service in the United Church was unique and memorable; it seemed entirely fitting that this remarkable pioneer should participate in his own service, by a pre-recorded personal recitation of two of his own poems—dealing with his philosophy of life and his love of the South Saskatchewan river hills.

THE PRESERVATION OF NATURE

by **J. S. Rowe,** Department of Plant Ecology, Saskatoon

What is the nature of man that has brought him to this point in history, where by all past standards he is rich in material things but not noticeably so in the quality of his environment? How is it that a tremendous human facility in engineering skills is accompanied by so little regard for the conditions of decent living, so that wealth seems often to be purchased at the expense of physical and mental health?

I suggest that the answer lies in man's own self-appraisal. While he recognizes himself as a worker, an artisan, a technologist, he does not with the same clarity appreciate that he is a biological creature of this earth. The implications are profound.

Man the Developer

There can be no doubt that man is an inveterate developer, a manipulator, an entrepreneur, an activist. In the spring as the snow melts, up and down the streets men with shovels appear, to dam, divert and channel the rivulets flowing in the gutters. This is play; but more seriously they then go out to do the same thing to our rivers, diverting the north-flowing ones south and the south ones north, straightening a channel here, putting in a dam there, often heedless of the economics, let alone the ecological, consequences. When Stephen Leacock was asked for an economic appraisal of the St. Lawrence Seaway proposal, he is said to have exclaimed: "Damn the economic appraisal! The concept is magnificent and it must be done!"

Western man's most serious hangup, to use the modern idiom, may well be his almost pathologic drive to develop, to not let things alone, to tinker with environment and to convert all mankind to the same activity. In the background, providing support, is a holy writ congenial to the manipulative urge, granting man dominion over the earth and its creatures with carte blanche either to subdue them to his purposes or exterminate them if they are in the way. Concurrently we have devised a work ethic that does not willingly excuse anyone from "productive" labour which, as automation increases, comes more and more to mean "busy work" such as selling insurance, running a gas station on a corner shared with three others, or advertising the virtues of advertising. It also means continuing to break land, or initiating new irrigation projects, when markets are glutted with agricultural produce, and frantically searching for new oil sources in the north, when present fields in the south are only producing at half capacity. We must recognize this aspect of our nature for, uncontrolled and rationalized in various ways, it is killing us.

Man the Earthling

Now let us look at man the earthling, an animal infinitely trainable and adaptable, and therefore slow to recognize the limitations of that unnatural environment in which his technologic skills have immersed him. He does not really recognize that he is a product of the ancient preindustrial biosphere, a mammal breathing air, drinking water and drawing sustenance from plants and animals that have evolved along with him over millions of years. It is not an article of his faith that he is *of the earth* and *belongs to the earth.*

Perhaps in the spring when the geese fly overhead, or on a soft June night fragrant with the scent of balsam poplar, he feels a longing to associate himself with nature; but such yearnings are soon squelched by the work philosophy of his daily life. So he surrounds himself with the symbols of a nature no longer experienced; potted plants, caged birds, cats and dogs, pictures of idealized landscapes. On week-ends and other holidays he mounts his "escape machine" and "breaks away" from the city, jamming the roads to the countryside, seeking picnic spots along the fence rows and in the parks, or reliving his not-so-long-ago racial childhood by fishing, hunting, or bird watching. Dasmann paints the picture in his book *A different kind of country.*

"When the warmth of June brings out the roses there is a roar of motors across the land, and where once the bison roamed, the migratory hordes of tourists now surge across the plains. Into all the mountains, up all the streams, across the lakes they move. Out from their stinking cities they come to stake their claim to the wildlands of America."

In the face of the obvious attraction that nature holds for man, why does he hesitate to admit being of this earth, and by that admission accepting full responsibility for it? The hesitation has deep historical roots; the old-time religion (that was good enough for father) instilled in him the idea that he is a "pilgrim and a stranger" here on earth, tarrying but a short time in this vale of tears, passing on soon to his true home in heaven.

This antithesis between earth and heaven is pointed up, for example, in the lines from Chaucer's "Ballad of Good Counsel:"

"What God doth send, receive in gladsomeness;
To wrestle for this world foretells a fall.
Here is no home, here is but wilderness;
Forth pilgrim, forth up, beast, and leave thy stall!"

It is significant that the attitude toward wild nature as "wilderness" was general until the eighteenth century when western man for the first time began to recognize beauty in the non-humanized landscape.

Even today the devolpment of a sensitivity to nature finds little in the current culture to stimulate and encourage it. What can Albert Schweitzer's philosophy of "reverence for life" signify in a world where the great nations spend the largest single share of their wealth preparing for the extermination of their neighbors? What can Aldo Leopold's ethic of land husbandry signify in a world that

Photo by Gwen Jones

Beauty of rock, forest and lake at Lac la Ronge, August, 1969.

systematically strips and defoliates whole landscapes for profit and for war?

Unfortunately, so long as man is estranged from his native earth there is little hope for conservation. A feeling for nature, of belonging to it and being a part of it, seems almost prerequisite to an intelligent assumption of stewardship where natural resources are concerned.

Planning against Progress

There is, then, a very real dilemma, in the conflict resulting from man's itch to tinker and develop resources, and his biological environmental needs. We have all sensed this in the familiar expression: "You can't stop progress!", usually uttered when some members of society are being bulldozed by a new techno-economic development. To the proponents of our culture, "progress" means (before everything else) "growth"; in population, in city size, in industries, in incomes, in the Gross National Product. Unfortunately, it also means depopulated farm lands, urban crowding, the careless use of energy, pollutiton of air, soil and water. It also means those impersonal "efficient" business forms against which the more intelligent student activists are rebelling; where alienated workers perform meaningless tasks to produce, advertise and sell products that are designed to be soon obsolescent.

Hopefully the young people who want "to be themselves" will continue to examine society's values and aims and to expose its many shortcomings. But they need direction. Perhaps there is help in those emerging ecological trends in education that, by treating the world as a functional ecosystem, illuminate the dependence of man on the flow of energy and the cycling of matter between the living and nonliving parts of the world.

A saner view of man and his world may come, surprisingly and expensively, from space explorations spinoff, for as Marshal McLuhan has pointed out we seldom appreciate an environment until we get outside it. Just as the traveller returning from abroad views his native land with new appreciation, so the astronauts with astonishment have seen the earth as *home*, a luminous blue-green cell, a jewel suspended in black space. A trip to the moon may be the best preparation for life on earth! Some day, with luck, the planet earth may be mankind's Natural Area maintained as the primeval environment from which he came, a place of recreation to which humans return from their pursuits elsewhere in the cosmos. It is not too early to begin treating the whole world as an International Park. Perhaps we can start modestly with the slogan "Make Saskatchewan a National Park"?

The long-term answer to the problem of man's survival is a cultural revolution that will bring a new symbiosis, placing biological well-being and environmental health foremost among our values. I am not one who agrees with the president of the British Association for the Advancement of Science, when, in a recent issue of *Science*, he says: "The deterioration of the environment produced by technology is a technological problem for which technology has found, is finding, and will continue to find solution." Unfortunately, I remember that the engineer's solution to pollution is dilution! Technology will not cure man's barbarism; that will pass away, as Shaler predicted more than 60 years ago, only with the emergence of a new humaneness, "when the generations begin to feel that they rightfully have no more than a life estate on this sphere, with no right to squander the inheritance of their kin."

But practically, and in the immediate future, what can be done? Dasmann suggests that we need to do three things:

1. Plan against that kind of "progress" that is equated with the mindless, cancerous growth of population, of cities, of resource exploitation.

2. Plan to preserve the irreplaceable values of our present landscape while fragments still remain in their natural state.
3. Plan to preserve and create diversity in the environment, for the trend towards uniformity is inimical to human life. Indeed, Charles Elton, the British animal ecologist, has defined "conservation" as keeping or putting in the landscape the greatest possible ecological richness and variety, for beauty, interest and stability.

There is at present a ground-swell of public opinion favouring nature conservation and the maintenance of environmental variety and now is the time, as they say, for "precipitate, hasty, premature action!"

In recognition that the relationship between man and his environment is undergoing a world-wide and rapidly intensifying crisis, the idea of an International Biological Programme germinated in 1964 and was initiated for a five-year period in 1967. The main emphasis of the IBP is on an understanding of biological productive processes in nature, a matter of some relevance to world problems of malnutrition and starvation. Sections of the programme are concerned with Production Processes (PP), Production of Terrestrial Communities (PT), Production of Fresh Water Communities (PF) and Production of Marine Communities (PM). Two remaining sections supplement the emphasis on production, with attention to Human Adaptibility (HA) and the Conservation of Terrestrial Communities (CT).

Reasons for the inclusion of a CT Section in IBP are the following: Conservation efforts throughout most of the world have been concentrated on the larger vertebrate animals, especially birds and mammals, and on areas with striking scenery. Except within some European countries, the myriad other animal and plant species (and the large variety of biotic communities and landscapes) have not drawn the attention of conservationists, and they have therefore received protection only by accident as when they chanced to be included in a national park or game sanctuary. The CT Section of IBP was designed to fill this gap and provide a basis for the world-wide protection of sample specimens of biotic communities and landscapes, including water bodies.

The philosophy of preservation is this: that any part of nature, whether plant or animal species, biotic community or landscape pattern, has its intrinsic value and interest. I hope that this is a self-evident truth. Each part of the earth is the product of long periods of evolution under the influence of a unique combination of controlling factors, and when it is destroyed, it is generally irrevocably lost. If therefore the persistence of communities and landscapes is threatened by trends toward intensified land use and the progressive simplification and impoverishment of biota and environments, then we have an ethical obligation to establish sanctuaries where preservation is the prime consideration. This will give present and future generations the opportunity for enjoyment and study of the natural areas and their components.

The IBP has given the idea of Natural Areas vigorous support, in the belief that areas of biological and physiographic importance are vital for future scientific work. As Canada has officially joined the IBP (and has initiated a major project investigating the biological basis of productivity at the Matador Grassland Site), the NRC is encouraging a Natural Area programme in the provinces and territories. The aim is to compile, for all the country by 1972, a preliminary inventory of candidate areas, providing in this a body of information on which a Canada-wide system of ecological reserves can be built. I want to stress that the program can only be accomplished by stimulating and providing a focal point for those activities already underway by governmental or private units, for example by the Wildlife, Parks and Forestry

Photo by J. S. Rowe

Matador Grassland Site, southwest of Beechy.

Branches of the Provincial Government, by the Natural History Society, etc. While NRC has provided limited funds for the initial inventory of Natural Areas, the acquisition of the latter must ultimately depend on the cooperation and financial support of government and interested private agencies.

In Saskatchewan in 1968 we set up a Regional Panel of government and university people to consider how a program might be developed in this province. It was not until this year, however, that an inventory team — Misses Gwen Jones and Marilee Cranna — took to the field. Pulling their own shelter with them (a trailer provided through the good graces of Mr. Hugo Maliepaard and the Wildlife Branch of the Saskatchewan Department of Natural Resources) they studied and described a number of areas that had been suggested by knowledgeable citizens.

Where do we go from here? The following cooperative action program is needed:

1. A better definition of the areas required for an adequate representation of Saskatchewan's landscapes and biological diversity. People who know the province and its land resources can be very helpful.
2. Inventory of candidate areas, to provide information on which decisions concerning preservation can be based. This is in effect a continuation of the CT field work.
3. Formal establishment of the areas; on crown lands using existing legislation, and on private lands perhaps using Nature Conservancy procedures.
4. Provision for protection, management and use of these ecological reserves.

To accomplish anything lasting, the last two points are essential. We *must* have the support of the Provincial Government; and all those individuals and organizations interested in nature preservation *must act in concert* if there is to be governmental support. This I see as the challenge of the immediate future for all Saskatchewan conservationists.

THE STATUS OF THE GREAT GRAY OWL IN MANITOBA, WITH SPECIAL REFERENCE TO THE 1968-69 INFLUX

by **Robert W. Nero,** Manitoba Museum of Man and Nature, Winnipeg
Photography by **Robert R. Taylor,** Manitoba Museum

The occurrence of a Great Gray Owl influx in extreme southeastern Manitoba became evident on December 8, 1968, when seven owls were sighted by a party of three observers. On the following day another party counted 12 in the same general area. Thereafter, a concerted effort was made to follow the course of what stands as the largest influx yet reported for Manitoba. Thanks to the cooperation of many interested persons, it has been possible to record in some detail this interesting movement of owls.

Although the Great Gray Owl *(Strix nebulosa)* is a permanent resident of the province, it is generally unknown outside its breeding grounds in the northern coniferous forest except in late fall and winter when it occasionally appears to the southward. Even within its breeding grounds it is a rare and retiring owl and is seldom observed. Hence, the majority of records for Manitoba are of winter wanderers.

Range and General Status

The breeding range in Manitoba as depicted by Godfrey (1966: 218) is presumed to cover most of the boreal forest zone (Figure 1). Nest records are needed to substantiate this picture, only three being known for Manitoba. A nest found at Dauphin Lake in 1926 by E. Robinson (Lawrence, 1926b; Robinson, 1954) actually lies outside the coniferous forest (see Figure 1) and was possibly an extralimital nesting; the species is not believed to occur as a resident in that area today. It was unrecorded in Riding Mountain National Park, 20 miles to the southwest, until 1969. Fifty miles to the northeast at Lake St. Martin the species was considered by Shortt and Waller (1937: 28) to be a "rather rare fall and winter visitor . . . not known to nest in the area." Two other nestings are both for The Pas, 170 miles northwest of Dauphin Lake, one in 1964 (Parmalee, 1968), the other (in the same nest!) in 1968 (Mitchell, 1969; Nero, MS). P. Reader, resident at Reader Lake, 10 miles north of The Pas, discovered both of these latter nests. Museum staff visited the 1968 nest site on three occasions in April, May and June. Considerable photographic coverage was obtained and a detailed report is in press.

Records of the Great Gray Owl in extreme northern Manitoba are few. It has not been recorded at Churchill (Taverner and Sutton, 1934) except for one record, one seen by C. A. Harwell and Hazel Ellis on June 18, 1949; Lawrence, 1949; Jehl and Smith, MS). Two specimens were received from J. P. Gardiner at York Factory, probably from farther inland, sometime prior to 1860 (Blakiston, 1863). More recently, on March 27, 1969, a Churchill handicraft store offered for sale two beaded ornaments made out of facial feather discs from two Great Gray Owls by a Cree Indian at Herchmer, 75 miles northwest of York Factory. At least one of these owls was shot at Herchmer in 1969 (pers. corres., Miss Betty Redhead, 1969). It may be more than coincidence that Herchmer is near Owl Lake and Owl River. Farther south at Thompson, two were reported seen by T. Lindsey in December, 1966 (Mossop, 1966). S. Waller (pers. corres., 1969) has records of specimens from Herb Lake: December 10, 1949, and Wekusko Lake (Puella Bay): December 17, 1942, about 95 miles southwest of Thompson. Waller also recorded six specimens from or near The Pas where it has twice been found nesting (above): November 18, 1939, September 25, 1950, December 18, 1950, March 26, 1961, February 22, 1966, and April 25, 1967. A specimen in the Manitoba Museum of Man and Nature was obtained from The Pas in July, 1950. Waller lists two additional specimens from Cedar Lake (now inundated by reservoir waters), southeast of The Pas: January 26, 1956, and February 4, 1956. The earliest reference to the species in The Pas region is by Vogt (1935) who visited an area south of Moose Lake in August, 1935, and wrote, "In the upper reaches of the journey we flushed several Great Gray Owls." The above records are all from north of the 53rd parallel.

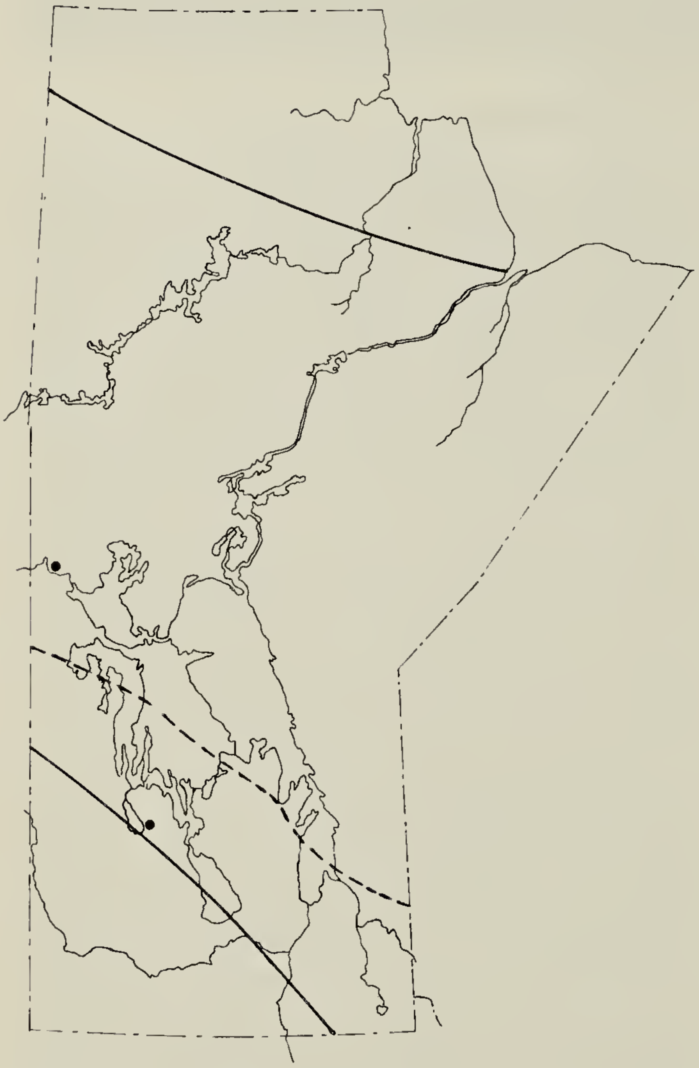


Figure 1. Location of the two known nest sites of the Great Gray Owl in Manitoba. The solid lines mark the bounds of the breeding range as given by Godfrey (1966: 218). The dashed line shows the approximate southern boundary of the northern coniferous forest (from Weir, 1960: 21). Numerous stands of conifers occur with deciduous trees to the south of the line, but north of the line black spruce, white spruce and balsam fir predominate.

In southern Manitoba, a specimen was collected in the 1850's by Donald Gunn at Selkirk (then "Selkirk Settlement") for the Smithsonian Institution (Baird, Cassin, and Lawrence, 1860: 56). Thompson (1890: 541) describes a specimen collected on September 29, 1884 at Carberry; he considered this species a "rare winter visitant" in southern Manitoba. A specimen in the Royal Ontario Museum was collected at Winnipeg on January 20, 1897 (pers. corres., J. C. Barlow). Additional records since then and prior to the fall of 1968 are given in Table 1.

The present data show that the Great Gray Owl has been recorded in southern Manitoba at least one or more times in 26 of the years in a 70 year period (1900-1969). So far as can be determined, numbers of three or more have been reported only for the winter periods of 1922-23, 1933-34, 1959-60, 1962-63, and 1964-65. The longest periods for which records are lacking are the 11 years from 1900 to 1910 and the eight years from 1937 to 1945. Where known, most records are from October to February inclusive, with highest counts in November, December and January.

The first report of an unusual number is given by Lawrence (1928) who stated: "H. Hatton and C. G. Harrold, Winnipeg, report that a small flight of these rare owls occurred in southern Manitoba in the fall of 1924, and a number were shot by gunners." This date appears to be an error and should presumably be referred to 1922, for Lawrence makes no reference to the specimens obtained by Harrold in the winter of 1922-23 (see Table 1). Lawrence reported only six other observations of Great Gray Owls between 1921 and 1955, the years of his column, and lists but one other record (in his 1933 notebook; see Table 1). Mossop states (1966): "During the winter of 1922-23 . . . an invasion occurred in the Winnipeg area when, because of their lack of fear of man,

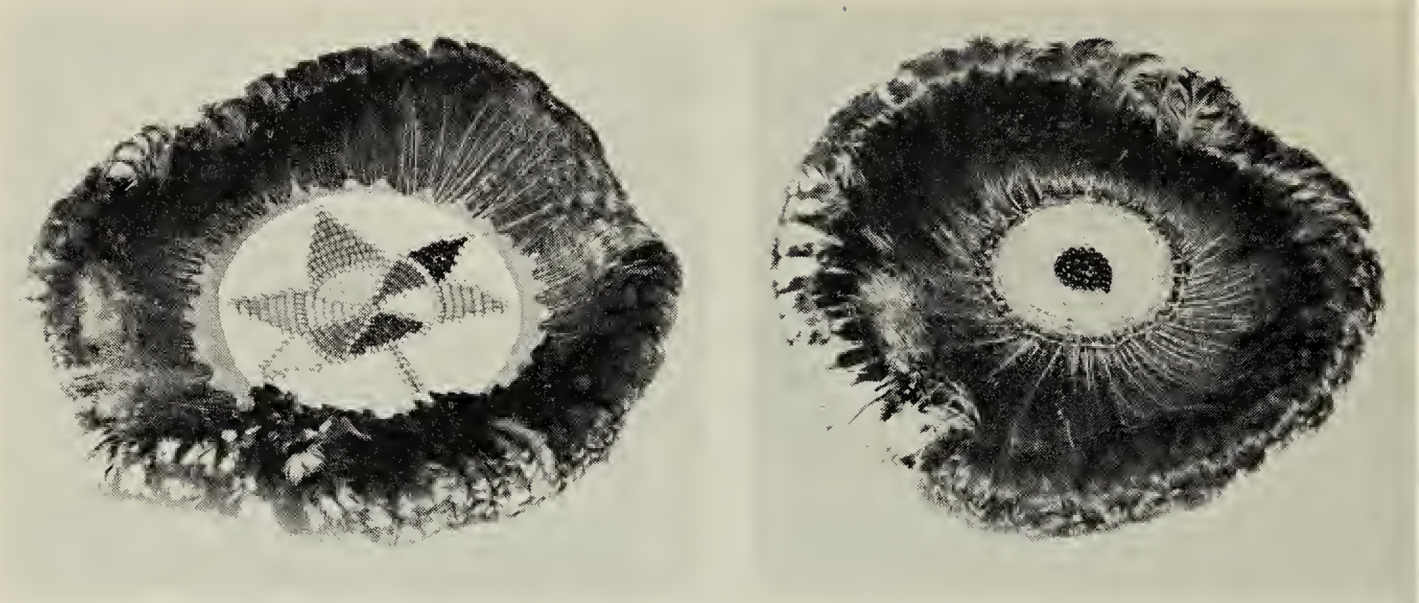
Great Gray Owl in white cedar (see also cover).

numbers were shot by irresponsible gunners." Mossop, who was a teen-aged boy at the time, reports (pers. corres., 1969) that he moved to St. Vital (Winnipeg suburb) in 1922, and that winter witnessed a "large invasion" in the St. Vital woods. Several owls were shot each Saturday by schoolboys with .22 rifles, these owls being brought wounded or dead to school for identification. Mossop said he saw possibly 20 Great Gray Owls that winter while on his way to school or on Saturday outings.

1968-69 Influx, General Aspects

Automobile transportation in winter in the twenties and thirties in Manitoba was not so readily available as today. Moreover, modern highways make it possible to traverse large areas that formerly were more remote. The development of lake cottages and weekend trips to the country, even in winter, has led to an increased number of observers being afield. Large-scale movements of owls are not likely to escape our attention these days, but prior to, say 1940, they could have. The years in which Great Gray Owls have previously been reported in southern Manitoba, even in limited numbers (Table 1), may, in fact, represent years of significant movements. Still, it is clear that over the past 20 years, at least, there has not been any influx of the magnitude observed in 1968-69. Thus, this event is probably a unique phenomenon for Manitoba. In northeastern Minnesota, where there have been only one or two sightings each winter since 1950, the winters of 1965-66 and 1968-69 were major influx periods (Green, 1966, 1969).

Owl records for the fall, winter and spring seasons of 1968-69 are listed in Table 2 (excluding a few additional reports for which identification was uncertain). The distribution of these records is shown in Figure 2. As shown in Table 2, Great Gray Owls appeared in early October, 1968, apparently increased in number in November, reached a maximum number in December, and remained in



Cree Indian beaded ornaments made from Great Gray Owl facial discs or ear coverts, Herchmer, Manitoba, 1969. The one on the left, which is made of two discs, bears the Canada 1967 Centennial official design—an interesting example of acculturation. Two other similar ornaments, probably obtained from the Hodgson area, 1922-27, are in the Manitoba Museum of Man & Nature.

high numbers until the third week in January. After that time a marked decrease was observed, particularly in an area of concentration along Trans-Canada Highway No. 1. Thereafter, smaller numbers were observed (roughly the same number as in October) in March, April, and May. With each successive month, it may be noted, owls were reported in from two to six new localities. This suggests that as the season advanced there was an actual increase in the number of owls in the area. Single and multiple sightings and records were obtained altogether from about 30 localities.

Two features of this influx are noteworthy: one, the large number of owls; two, the relatively small portion of Manitoba comprising the influx area (see Table 2 and Figure 2). The total number of owls involved must range upwards of 50 to 100. Note that 14 dead owls were counted to January 5, at which time 12 live ones were seen in one small area (Hadashville to Falcon Lake). Nine seen in the same area on December 2 and January 18, plus 12 seen at distant points in this period give a minimum of 35. However, other observers reported large numbers elsewhere during this period. R. Blanchard noted seeing "as many as 15 birds in one day" between Ste. Rita and Whitemouth (20 miles) at various times during the fall and winter. Although activities are restricted in winter, Parks Branch field staff reported seeing owls from December onwards (not listed in Table 2) in several areas in the Whiteshell Provincial Park. In view of the broad distribution of owls and the large, remote tracts of suitable habitat that were not examined, it seems plausible to set the estimate at 100 birds. This is somewhat less than the earlier estimate of "a few hundred" (*Blue Jay*, 27: 39-40).

Although the main influx area covered about 10,000 square miles (roughly, that portion of Manitoba south of Lake Winnipeg and east of Winnipeg), owls were most abundant in the northern and eastern section of about 3600 square miles. During the same observation period Great Gray Owls were seen in Minnesota over a much larger area, more than 300 miles from north to south, the northern portion alone covering 30,000 square miles (from data by Green, 1969). It is not known, however, whether owls were distributed throughout this region. From the "very end of December through the first week of January,

Table 1. Great Gray Owl records for southern Manitoba, prior to fall 1968

Date	Number	Location	Observer(s)
1911(?)	1 captive	Winnipeg	A. G. Lawrence (1928)
1917 February	1 specimen	Swan Lake	C. G. Harrold (in Man. Mus.)
1918 February	1 seen	Kalevala	E. S. Norman (1920)
1922 December 10	1 specimen	Waugh	C. G. Harrold (in Man. Mus.)
1923 January 6	1 specimen	Beausejour	C. G. Harrold (Man. Mus.)
” January 6	1 specimen	Winnipeg	C. G. Harrold (Man. Mus.)
” December 22	1 specimen	Moosehorn	C. G. Harrold (Man. Mus.)
1926	remains in Golden Eagle		A. G. Lawrence (1926a)
1928 February 14	1 seen	Teulon	H. D. Cumming (Lawrence, 1928)
1933 January	2 seen	Whitemouth	V. Latta (Lawrence, 1933)
” December 3	1 specimen	Whitemouth	McQuade (Lawrence notebook)
1934 January	2 seen	Whitemouth	V. Latta (Lawrence, 1934)
1935 November 7	1 specimen	Lake St. Martin	Shortt and Waller (1937)
1936 December 27	1 seen	Stonewall	I. M. Gardner (pers. corres. K. Gardner, 1969)
1945 November (late)	2 specimens	Sandilands	H. Mossop (1965; pers. corres., 1969)
1948 or 49	1 seen	Selkirk	G. Beck (pers. corres., 1969)
1950 December 2-3	2 seen	Petersfield	S. Wick (Lawrence, 1950)
1951 January 12	1 seen	Stonewall	K. Gardner (Shortt, 1951)
1952 October 24	1 seen	Clarkleigh	K. Gardner (pers. corres., 1969)
1955 December 8	2 seen	Marchand	A. Ferguson (Mossop, 1956 and pers. corres.)
1959 November 21			A. Shortt (1959)
” November 30	1 seen	Woodridge	K. Gardner (pers. corres., 1969)
” December 20	1 found shot	Winnipeg (Charleswood)	H. Mossop (1959)
1962 December 16	1 seen	Beausejour (11 mi. E.)	G. Smith (Nat. Hist. Soc. Man. Newsletter No. 2, Fall 1962)
” winter	numbers seen	Riverton (NW)	T. L. Couture (pers. corres., 1969)
1963 winter	numbers seen	Riverton (NW)	T. L. Couture (pers. corres., 1969)
” February 15	1 seen	Gypsumville (15 mi. W)	R. Frisch
” March 23	1 seen	Gypsumville (15 mi. W)	R. Frisch
1964 November	2 seen	Sprague	J. Olson (Mossop, 1965)
1965 April	1 seen	Sprague	J. Olson (Mossop, 1965)
” November 16	1 seen	Steeprock (5 mi. W)	I. M. Gardner (pers. corres., K. Gardner, 1969)
1966	1 specimen	Teulon area	K. Hawkins (pers. corres., 1969)
1967 October (late)	1 seen	Braintree (6 mi. S)	D. Raveling (pers. corres., 1969)
” November	1 seen	Hadashville	D. Raveling (pers. corres., 1969)
1968 April 14	1 specimen (found shot)	Mafeking	R. R. Taylor (Man. Mus.)
” June	1 specimen	Berens River	Miss B. Malyon (pers. corres., 1969)

a big influx occurred in the Duluth area . . . From late January through early March . . . reports of about 20 owls from the Twin Cities area . . . few reports after the first week of March . . . " (Green, 1969). Since Minnesota is outside the usual breeding range for this species, it may be assumed that all the records from that state were wanderers from farther north.

The Manitoba influx area may also be outside the usual breeding range of the species (Figure 2). There are no known summer records for this area, apart from birds that apparently stayed on after the influx (May records, Table 2). Although many square miles of habitat within this area seem suitable for nesting, particularly in the north and northeastern portions, the presence there of numerous cottage owners and summer visitors, coupled with a lack of reports, suggests that the Great Gray Owl is not normally present in the breeding season.

Even winter records are not common for this area. E. Schindler, a forester residing at Falcon Lake, said that a Great Gray Owl seen by him in October 1968 was the first that he had ever seen. W. Eliuk, a pulp-wood contractor living at Woodridge, said that though he covers a great deal of southeastern Manitoba during the winter months, one seen in December 1968 was the first he had seen. W. Prodkowsky, resident at Prawda, said he had not seen any for many years previous to 1968.

A majority of the records of Great Gray Owls in southern Manitoba from the period for 50 years prior to 1968 are from the present influx area (Table 1). Of the 37 individuals listed, 25 or 68 per cent fall within this area. This may mean that the area is more often visited by Great Gray Owls than other areas in southern Manitoba or else that there are more observers here. The former explanation seems more reasonable. This leads one to conclude that owls find this area particularly

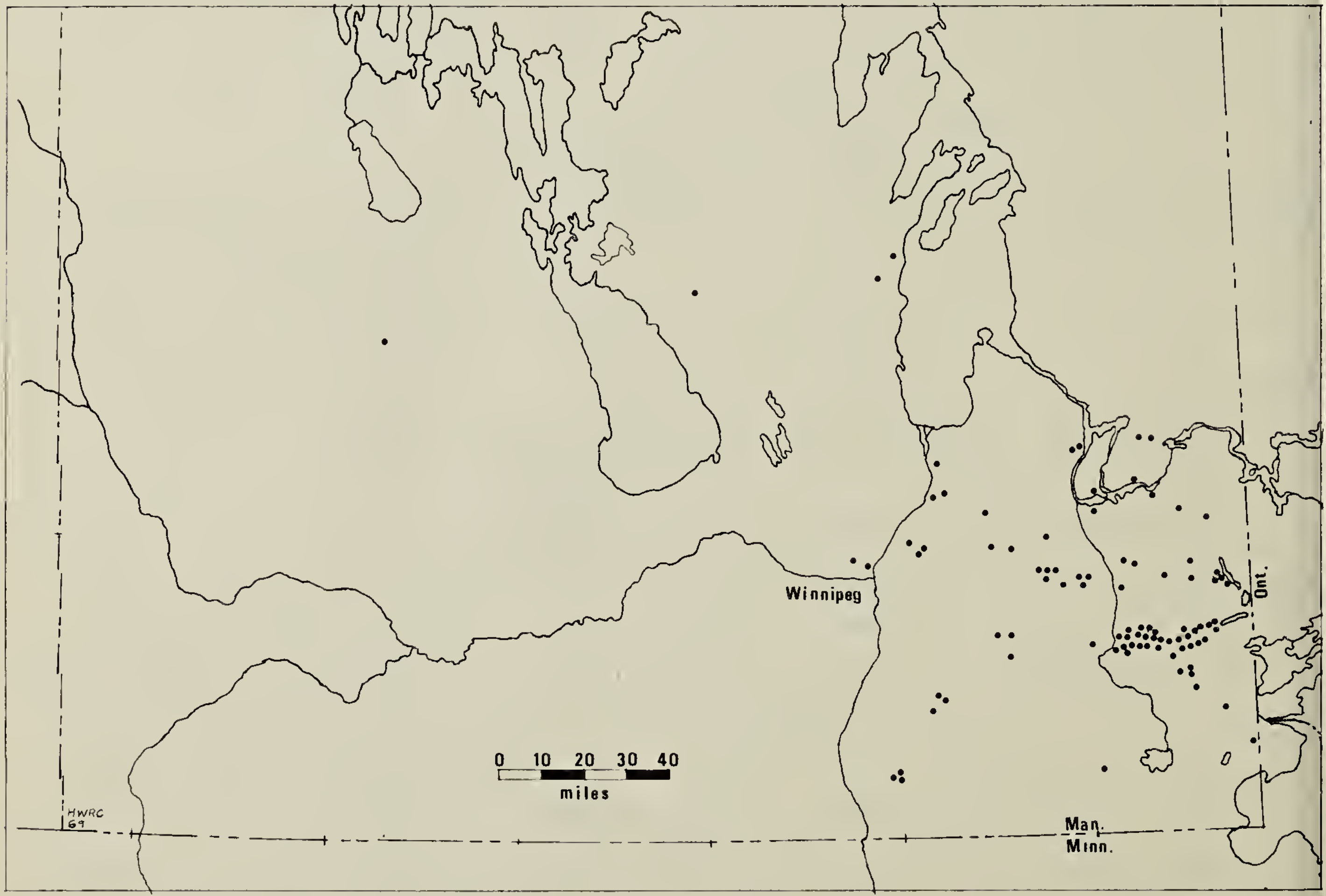


Figure 2. Great Gray Owl occurrence in southern Manitoba, winter 1968-69. One or more owls were reported seen or found dead at the localities shown. Winnipeg lies at the junction of the Red and Assiniboine rivers.

Great Gray Owl in hand for banding

attractive or else that it is close to well-populated Great Gray Owl breeding grounds. It is also possible that weather conditions, e.g., snowfall, in adjacent regions are more apt to force Great Gray Owls to move out of their breeding grounds.

Whatever the reasons, the prevalence of owls in the area from Winnipeg east ties in with observations made to the south. In Minnesota, winter wanderers are "normally most common in the northwestern part of the state" (Green, 1966). This does not necessarily mean that birds in this part of Manitoba and Minnesota originate in Manitoba. They could equally well come from Ontario. A "major invasion" in northeastern Minnesota in 1965-66, mostly observed along the north shore of Lake Superior, was accompanied by only one sighting in Manitoba, and that was at Sprague in the extreme southeastern corner. Allin (1966:66) noted an absence of birds at the Lakehead "at the time they were regularly reported at Duluth and north to Tofte" but later in the season in March they "had several reports which may have represented birds returning to their northern homes." During the recent period of abundance of owls in southeastern Manitoba, they seemed to be absent in adjacent Ontario. M. Dederick, travelling by car from Winnipeg through western Ontario (to Kenora, Dryden, Atikokan, Fort William, etc.) every three or four weeks, saw owls only near Falcon Lake beginning November 20, 1968. A Winnipeg resident and falconer, Dederick had been driving this route since 1967, but the Great Gray Owls seen on November 20 were the first observed by him at any time.

Influx years in northwestern Minnesota do not always match influxes in Manitoba, but there is some correlation. Records show that owls were abundant in the years 1896-97, 1906-07, 1922-23, and 1926-27. At Roseau, just 10 miles south of the border (and less than 30 miles west of the southeast corner of the province), one observer noted that it was especially abundant in 1906-07 and again in 1926-27 when 18 owls were brought to

Table 2. Great Gray Owl records 1968-1969

Date		Number	Location	Observer(s)
October	4	1 specimen (shot)	Richer (area)	D. C. Purvis
"	8	1 seen	Anola (8 mi. NE)	R. Webb
"	12	1 specimen (found shot)	East Braintree (½ mi. S)	G. A. Peever
"	23-30?	1 seen	Hadashville (E)	E. Schindler
November	8	1 specimen (road kill)	Lac du Bonnet (2½ mi. N)	W. Schwartz
"	9	2 seen	Elma (6 mi. W)	R. W. Nero
"	9	1 specimen (found shot)	Carrick (SE)	L. Konig
"	11	1 seen	Nutimik (½ mi. S in the Whiteshell)	R. Starrdom
"	12	1 specimen (found dead)	Arborg (5 mi. E)	P. Lachuta
"	20	3 or 4 seen	Falcon Lake area	M. Dederick
"	23	1 seen	Elma (3 mi. SE)	Nero and R. R. Taylor
"	23	1 specimen (shot)	Richer (area)	D. C. Purvis
		1 specimen (found shot)	East Braintree (10 mi. S)	M. Gagnon
"	25	4 or 5 seen	Falcon Lake area	M. Dederick
December	1	7 seen	Richer to Falcon Lake	M. K. McNicholl, V. H. Scott and Taylor
"	2	12 seen	Richer to Falcon Lake	Copland, Nero and Taylor
"	5	5 seen	Richer to Falcon Lake	Copland, Nero, Taylor and W. Renton
"	1-7?	1 seen	East Braintree (20 mi. S)	W. Eliuk
"	14	2 seen	Falcon Lake area	Mrs. G. Keith
"	15	3 seen	Hadashville to Falcon Lake	A. H. Anderson and Copland
"	20?	3 seen	East Braintree (5-6 mi. S)	F. Hayword
"	21	2 seen	Prawda, Moose Lake area	Copland and G. J. Smith
"	28	1 seen	Steinbach (5 mi. SW)	T. Wiens
"	29	1 seen	Pointe du Bois (5 mi. W)	W. J. Schwartz
"	29	2 seen	Prawda, Falcon Lake	Copland and Nero
"	29	1 specimen (remains)	Hadashville	Copland and Nero
"	?	8 seen	Rennie area	*Fide* G. Cotter
"	?	1 seen	Oakbank (2½ mi. NW)	Mrs. J. Smythe
"	29	1 specimen (found dead)	Pointe du Bois (West)	R. Pohl
"	29	1 specimen (shot)	Pointe du Bois (5 mi. W)	W. Schwartz
"	?	4 specimens (found shot)	Sailing Lake area	*Fide* G. Cotter
January	5	11 seen	Birch R. to Falcon L.	Nero, P. Press and L. Wallace
"	5	1 seen	Hadashville	M. K. McNicholl, V. H. Scott

Table 2. Great Gray Owl records 1968-1969 (continued)

Date	Number	Location	Observer(s)
January 5	1 seen	Braintree area	D. I. MacDonald
" 8	1 seen	Winnipeg (St. James)	D. Sutton
" 11	1 seen	Winnipeg	Miss S. Barker
" 12	6 seen	Birch R. to Falcon L.	Nero and Taylor
" 12	3 seen	Ste. Rita	P. Press L. Wallace
" 13	8 seen	Birch River area	Nero and Taylor
" 18	9 seen	Birch River to Prawda	D. Hatch, Nero and Taylor
" 21	1 seen	Ste. Rita	Nero and Taylor
" 22	1 seen	Seven Sisters (3 mi. E)	Nero and Taylor
" 23	1 seen	Birch River	Nero and Taylor
" ?	1 seen	Oakbank (2½ mi. NW)	Mrs. J. Smythe
" ?	2 seen	Falcon L. area	M. K. McNicholl V. H. Scott
February 1-7 ?	1 seen	Steinbach (5 mi. SW)	T. Wiens
" 1-7 ?	1 specimen (shot)	Tyndall	G. Hoban
" 8	1 seen	Richer (2 mi. W)	C. K. Smith
" 12-13 ?	1 specimen (shot)	East Selkirk	D. C. Purvis
" 16	1 specimen (found dead)	Prawda (banded Birch R. Jan. 23)	N. Dymetro
" 17-18	1 seen	Beausejour (7 mi. SE)	D. James
" 19	1 seen (from aircraft)	Betula L. (3 mi. W)	R. Blanchard
" 22	1 seen	Lac du Bonnet (2 mi. N)	W. Banting
" 20-27 ?	1 seen	East Selkirk (east of river)	G. Beck
" ?	1 seen	Steinbach (10mi. SW)	T. Penner
" ?	1+specimen (found dead)	Steinbach	P. J. Toews
" ?	3 seen	Arnaud (3 mi. SE)	J. P. King
March 2	1 specimen	Seven Sisters (Julius)	M. K. McNicholl
" 18	1 specimen (remains)	Rennie (3 mi. E)	L. J. Bidlake
" 23-30 ?	1 specimen (road kill)	Birds Hill (1 mi. N)	W. Johnson
" 30	1 specimen (found shot)	Eriksdale	I. L. Couture
April 5	1 seen	Whitemouth (6 mi. E)	M. Baker
" 14	1 seen	Riding Mountain Nat'l Park	R. & A. Cooper
" 19	1 specimen (remains)	Pinawa (8 mi. E)	D. R. Halliday and D. Raveling
" 19-20 ?	1 specimen (found dead)	Riverton	G. Barca
" 23-30 ?	2 seen	Rennie-Whitemouth rd.	R. Blanchard
" ?	1 specimen (remains)	Pinawa	C. R. Hillier
May 2-3	1 seen	Elma (5 mi. W)	R. Blanchard
" 12	1 seen	Selkirk (8 mi. N)	G. Beck
" 15	1 seen	Hazel Creek	L. J. Bidlake
" 17	1 seen	Hazel Creek	Nero and Taylor

him (Roberts, 1932: 625). No definite records are available from Manitoba for those years. On the other hand, in the winter of 1922-23, an influx occurred in Manitoba as already noted.

According to Roberts (1932: 625) "it is present every winter in the northern part" of Minnesota. This does not seem to be the case for adjacent Manitoba or other parts of the province where it might be expected. There are many years when it has been unrecorded even though winter bird counts have been made regularly in various suitable areas of Manitoba. This further supports the idea that owls arriving in Minnesota and adjacent Manitoba may be from Ontario breeding grounds. Of course, there is a large area to the north and east of the entire length of Lake Winnipeg from which owls could be coming. The lake may act as a barrier during winter movements, shunting owls southward.

The possibility of a relationship between Great Gray Owl populations and small rodent cycles has received some attention. Elton (1942:224-225) noted a similarity between population cycles in Norwegian "foxes and mouse-like rodents" and those of Labrador and Ungava: "these lemming and vole years (often coming simultaneously over big tracts of country) are magnets that draw in together many kinds of predators and fortify (temporarily) their numbers." Included among these predators, according to Elton, is the Great Gray Owl (as *"Strix lapponica"*). Since marked winter movements of Great Gray Owls probably follow years of "good reproduction . . . in connection with decreasing frequency of small rodents in the breeding localities" (Höglund and Lansgren, 1968: 410) correlation of influx years across broad regions would seem possible. This may hold for extreme southeastern Manitoba and adjacent parts of Minnesota. There seems to be less evidence of this relationship between Manitoba and Saskatchewan. In the latter province, 13 owls, nearly half of all reported, were observed in the winter of 1955-56 (Houston, 1957), only one being recorded for that period in Manitoba.

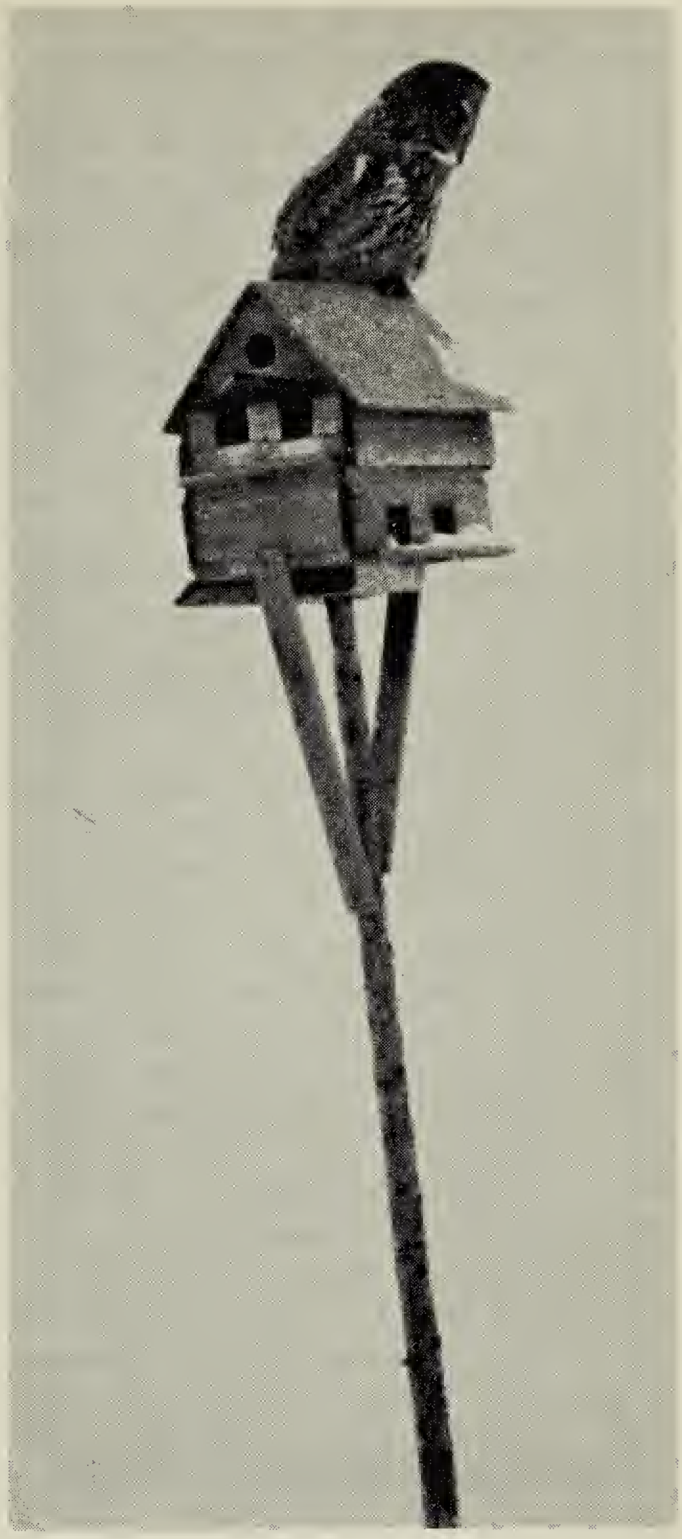
One problem that arises in connection with assessing these records (Table 1) is the possibility that some may represent birds not far from breeding grounds. Moosehorn, Lake St. Martin, Steeprock, and Mafeking are close to remote coniferous forests and records from these localities may be unrelated to winter movements in extreme southeastern Manitoba. Increased contacts with persons working in the northern woods in winter might be of interest in this connection. T. L. Couture reported, for example, that during the winters of 1962 and 1963 he saw "quite a number of these birds while checking on timber operations in the heavy bush area North West of Riverton" (pers. corres., 1969).

Distributional Changes During Influx Period

Judging by the monthly distribution (Table 2), owls left December-January concentration points and dispersed outwards in February and March. This apparent movement may have been related to the onset of the breeding period or to increased snowfall and the difficulty of locating prey. A northward movement presumably back toward the breeding grounds, is indicated by April records. Three owls observed in late March and April at localities far beyond the main influx area, namely Eriksdale, Riding Mountain National Park, and Riverton, may have been part of this movement. The Riding Mountain record (nine and one-quarter miles east of Wasagaming) is unusual in that it is the first report of a Great Gray Owl for the park (Soper, 1953; park records). The park includes a substantial area of boreal forest and the lack of even a single winter record in this locality suggests that there is little southward movement of owls from presumed breeding range in western Manitoba.

Snow cover may have influenced the distribution of owls locally. By January 5 only three inches had accumulated in the influx area. This increased to eight inches by January 15, and to 19 inches by January 31. To the east, at Kenora, five inches had accumulated by the end of December, and by the end of January, 32 inches of snow blanketed the Kenora region (data from Winnipeg weather office, courtesy A. H. Lamont). Observers looking for owls were aware, even in late November, that the depth of snow cover increased abruptly just east of Manitoba.

The last day on which owls were seen in large numbers was January 18, when nine were seen within three miles late in the afternoon. Six of these were in sight at one time and it looked as if this gathering of owls presaged a movement out of the area. They appeared to be listening to each other's calls and once one turned in flight to approach another flying bird. This may have been territorial aggressiveness as reported by Godfrey (1967) or a sexual encounter. At any rate, from January 22 on, when the area was next visited, no more than one bird per day and sometimes none was found (January 26, February 2, 6 and 13) although on some days observers drove for 10 or 12 hours, covering as much as 250 miles. Although possibly only a coincidence, a concentration of owls at Duluth, Minnesota began on January 18, the same day of the above movement, to "move around more and leave the hunting territories they had established" (Green, 1969).



Martin house serves as perch for owl hunting mice.

Habitat

The descriptions of habitat provided by Pittaway and Brunton (1969) for Great Gray Owls wintering in eastern Ontario could as well apply here: " . . . abandoned farmland with a coarse overgrowth of shrubbery and small trees is occupied. These fields are generally bordered by extensive and deep mixed or coniferous forests." In Saskatchewan, Law (1960) observed owls appearing regularly at a farm near "dense bluffs of spruce, poplar, pine and tamarack with many open meadows, making an ideal place for the Great Gray Owl to spend the winter months . . . "

In our area, although birds were seen hunting in open fields, sparsely wooded tracts, jack pine, tamarack and aspen poplar stands, etc., they were seldom far from heavy spruce forests. The influx area includes two major forest reserves, both nearly surrounded by farmland. Bogs, wet meadows, old cleared land, and active farm lands provide numerous openings within and adjacent to the forests. Aspen poplar in various growth stages is abundant and frequently appears in mixed stands. Tree growth along streams, farm buildings and other buildings add variety to the landscape found in the area.

We observed owls perched high in large elm trees, on the tops of mature jack pine and spruce, on slim aspens that bent over with the owl's weight, on bird houses, barns, fence posts, large rocks, on the snow, in short, on almost every available kind of perch. Still, we would agree with Law (1960) that owls were most frequently found perched on a "side limb of a fair-sized poplar or spruce eight to twelve feet from the ground."

We looked for owls along roads in the late afternoon and evening when hunting behaviour was at a peak. During the day when it was cloudy or snowing, birds were also active, but on bright, warm days they usually sat close and dozed in the sun. At such times they were more easily approached than otherwise. Sometimes birds were seen at distances up to one-half mile from the road, but many were in fact observed on roadsides.

In Table 2, "Richer to Falcon Lake" denotes a 40-mile stretch of Trans-Canada Highway No. 1. Because more owls were found by us along this route than elsewhere and since the road was readily accessible, we travelled this route as often as we could. Great Gray Owls were seen frequently over the eastern portion of about 26 miles, from Hadashville to Falcon Lake. Thus, records from Hadashville, Prawda, East Braintree (except where mileage indicates otherwise), Birch River, and Falcon Lake were relatively close together. On December 2, 12 birds were spread along the whole stretch of 40 miles; on the other hand, 11 observed on January 5 were seen in about 20 miles, and nine were seen within three miles on January 18, six of the latter being in sight at one time. The reason for this concentration seemed to be the abundance of mice in the grassed road allowances along the highway, plus the presence of adjacent trees for perching while hunting. An even greater concentration of owls was reported in late December, 1968 at Littlefork, Minnesota (near International Falls), 16 owls having been seen in one day in a four to five mile stretch of road (Green, 1969). In forested regions at least, the wide verges of modern highways may provide significant additional grassy habitat. In addition to Great Gray Owls we saw two Barred Owls, (December 2 and 5), several Great Horned Owls, and two Hawk Owls (December 1 and 5) hunting the roadsides. But if the highway thus provides cover for prey species, it also provides a hazard for predators. Great Gray Owls seemed oblivious to automotive traffic and sometimes flew slowly and carelessly across the highway even in the face of traffic. Some owls evidently died in this way, but the conspicuousness of roadside owls also makes them vulnerable to "varmint hunters" and these may take a greater toll (see Table 2).

Food Habits, Hunting Behaviour, Trapping and Banding

Food items recovered from pellets or stomach contents are shown in Table 3. Meadow Vole *(Microtus pennsylvanicus)* comprised 61 per cent of the total prey individuals recovered; Heather Vole *(Phenacomys intermedius)*, seven per cent; Masked Shrew *(Sorex cinereus)*, 30 per cent; and Norway Rat *(Rattus norvegicus)*, two per cent. The occurrence of Heather Voles was unexpected and interesting, for there are few records of this elusive mammal in southern Manitoba. These data are in accordance with other reports on food habits of the Great Gray Owl (e.g., Godfrey, 1967; Höglund and Lansgren, 1968).

Our observations of hunting behaviour support the belief expressed by others that this owl can find its prey solely by sound (Law, 1960; Godfrey, 1967; Höglund and Lansgren, 1968), thus enabling it to locate and capture successfully prey beneath

Table 3. Great Gray Owl pellets and stomach contents, Manitoba, 1968-69

1. May, 1968. Near The Pas. Pellet from near nest-site.
    Nicrotus pennsylvanicus — 7
2. November 9, 1968. Removed from stomach of female found dead southeast of Carrick.
    Microtus pennsylvanicus — 3
    Phenacomys intermedius — 1
3. December 5, 1968. Pellet observed ejected by owl perched on large boulder beside Highway No. 1, 5 miles east of Prawda.
    Microtus pennsylvanicus — 3
    Phenacomys intermedius — 1
    Sorex cinereus — 1
4. December 28, 1968. Removed from stomach of road kills. 2 miles south, 3 miles west of Hadashville.
    Microtus pennsylvanicus — 5
    Sorex cinereus — 2
5. December 29, 1968. Removed from stomach of male shot by hunter 5-7 miles west of Pointe du Bois.
    Microtus pennsylvanicus — 3
    Phenacomys intermedius — 1
6. December 29, 1968. Removed from stomach of male found dead on road west of Pointe du Bois.
    Rattus norvegicus — 1
7. ca. 1st week February, 1969. Removed from stomach of specimen shot by farmer near Tyndall.
    Microtus pennsylvanicus — 2
    Sorex cinereus — 1
8. April 19 or 20, 1969. Removed from stomach of male found dead at Riverton.
    Microtus pennsylvanicus — 4
9. Late winter 1968-69. Removed from stomach of male submitted to taxidermist from southeastern Manitoba.
    Sorex cinereus — 10
    Microtus pennsylvanicus — 1

snow cover. When listening to a mouse it may on occasion seem completely unaware of an approaching observer so much does it seem to concentrate on its prey. Pittaway and Brunton (1969) wrote that "it seems almost hypnotized by the prey activity below."

Late one afternoon (January 18) we found a bird perched about 12 feet up in a small tree steadfastly peering down toward the ground where something held its attention. We set a trap with mice on the snow within 50 feet, but the owl seemed uninterested and kept peering down at one spot in the snow. Later, when it was almost dark, an attempt was made to snare the owl. Robert Taylor was unable to see the wire loop on the end of his snare-pole and after making several vain attempts to bring the loop over the owl's head accidentally bumped the owl's beak with the end of the pole. Only then did the owl fly away! We were all convinced that the owl had been concentrating all this while on a mouse beneath the snow.

Squeaking sounds attracted them and we tried thus to draw their attention to our baited traps. On January 18, as we stood by our car on the edge of the highway squeaking for a bird in an adjacent field, a second bird, evidently attracted by our squeaking, flew towards us and then pounced upon a small lump of brownish ice in the middle of the highway about 75 feet away. It sat for a few seconds looking down at its "prey" before it flew away.

Good visual acuity in Great Gray Owls has been reported by Pittaway and Brunton (1969) who observed that owls responded immediately to a mouse appearing on top of the snow at 200 yards distance. Response at similar distances to traps baited with live animals was observed by us on several occasions. Bal-chatri traps of several kinds, that is, hardware cloth cages covered with slip-nooses of monofilament nylon (see Berger and Mueller, 1959) were used to trap owls for banding and photography.

We set out traps using live House Sparrows *(Passer domesticus)*, Meadow Voles, Gapper's Red-backed Mice *(Clethrionomys gapperi)*, black, gray, and white House Mice *(Mus musculus)*, and a Red Squirrel *(Tamiasciurus hudsonicus)*. Traps were always set as close as possible

Response to baited trap (lower right). Owl watches closely.

Owl launches directly towards trap.

Owl soars in to trap. Note wing tips.

to an owl and in plain sight, the idea being to attract the attention of the owl to the lure. In some cases owls showed an interest in the lure even before the trap was set down. Movement of the lure was essential to eliciting approach behaviour. In the subzero temperatures at which we sometimes operated it was hard to keep the mice alive long enough to attract an owl to the trap. The usual response, if it came at all, was similar to what we had observed when owls were hunting normal prey. After a period of peering and head-turning the owl would make a direct and steady flight to the trap, hover overhead briefly, then drop down onto or beside the trap. This would be followed by a variety of leg and foot grapplings at the cage as the owl attempted to seize the prey. House Sparrows sometimes brought owls in to the trap, but one owl appeared startled and flew away when a sparrow suddenly fluttered up in its face. It looked as if the owls were not used to dealing with birds as prey. A Red Squirrel was used successfully to trap one owl, but on another day an owl landed beside the trap, took a long look at the squirrel, then flew away. Mice worked best, providing they were active, and they always elicited strong attack behaviour once an owl was at the trap. Not all owls that came to the traps were caught, and some could not be attracted.

Four owls were captured in traps and two were taken with a snare on the end of a pole. A bird trapped and banded at Birch River and Highway No. 1 on January 23 was found dead at Prawda (about three miles away) on February 16. It had evidently died of starvation and stress after being injured. No other band returns have been made. Inasmuch as these six birds were banded within a relatively small area without a recapture, we felt that the number of owls in the area was probably larger than was generally believed. The concentration along Highway No. 1 may well have involved owls that were moving in and out of the area. Recovery of even one banded bird on or en route to its breeding grounds (or observations of color-marked birds) would help determine the origin of the owls wintering in Manitoba and Minnesota.

Relationship with Other Species

The report by Lawrence (1926a) of a taxidermist finding the remains of a Great Gray Owl in the stomach of a Golden Eagle is of some interest. Although details are missing from the report, the eagle, which was shot, was presumably taken in Manitoba and in the winter of 1925-26, for Lawrence's column was written in May. In an extensive study of the Great Gray Owl in Sweden, Höglund and Lansgren (1968) record only one possible case of a Golden Eagle preying upon this species.

Our observations of contacts between Great Gray Owls and other species of birds are limited but similar to reports by others (e.g., Law, 1960; Pittaway and Brunton, 1969), there being nothing to indicate that birds regard this species as an enemy. On a few occasions a Common Raven made a casual pass at a perched owl and once a Gray Jay flew in briefly. The owls were otherwise ignored though there were lots of opportunities for Black-capped and Boreal chickadees, Gray and Blue jays, and other species, to come in contact with them.

Non-breeding or Nesting?

The possibility that Great Gray Owls may nest within the influx area following a winter of abundance needs to be considered. The owls present in the area through April and well into May (Table 2) could have been nesting but we have no data to support this. Winter influxes probably include a large number of sub-adult birds, and these latter may, as non-breeders, account for late season stragglers.

Observations of a bird on the Hazel Creek, about 13 miles west of Elma, on May 15 and May 17, were inconclusive. The creek, which runs through large black spruce bogs, is bordered by a riparian forest of black poplar, elm and ash, often of mature size, which seemed ideal nesting habitat. Taylor and I found a bird moving along the edge of the creek at 8:30 a.m., May 17, probably the same one seen two days before and two miles farther upstream by L. J. Bidlake. We followed it along in a canoe for half an hour, hoping to follow it to a nest site, but its hunting was desultory and unsuccessful. After moving upstream several times it settled on a short limb tight against the trunk of a large black poplar as if prepared to go to sleep. Two and one-half hours later when we returned it was still in the same position, so protectively colored as to be almost invisible. Although we knew the exact spot where it had gone to roost, we had to paddle close before we were able to pick it out from the striped pattern on the tree.

Further checks of this area on May 22 and June 28 failed to turn up the owl. It needs to be appreciated, however, that more than 150 square miles of nearly inaccessible bog and forest surround the creek at this point.

Conservation

The tameness and conspicuousness of this large owl are characters that have been mentioned by nearly every observer. It is this aspect that makes it unlikely that the species could long persist in proximity to man, and this may be a major factor limiting its distribution. Baines (1954) remarked that "it is quickly exterminated as settlement takes place."

In spite of the large numbers of Great Gray Owls seen in Manitoba in the winter of 1968-69 it should be remembered that this bird is rare. Jones (1954) considered it "one of the rarest birds now found in Canada", noting that for two years in Alberta "Al Oeming . . . and myself have searched in vain for the nest . . . Our travels of over ten thousand miles have taken us through hundreds of miles of virgin timber on horse-back and often by foot. To date not one of these birds has been seen alive!"

If fall and winter movements are "to be understood as a more or less pronounced starvation migration"

(Höglund and Lansgren, 1968: 410), the decimation of Great Gray Owls in winter may be a regulating factor of value to the species. However, their vulnerability is such that excessive numbers are lost in each influx. In Minnesota, Janet Green observed (1969) that "many of the owls died before they were able to make the return journey", the death of 11 owls resulting from shooting, starvation, auto collision and predation. In Manitoba, two dozen were found dead, shooting (13 birds), and auto collision (8?) accounting for the largest number. Starvation was also noted, one observer having found an emaciated bird where it "had fallen off a branch . . . " A number of birds that we handled were noticeably thin.

Natural mortality is something the Great Gray Owl has lived with for a long time, but shooting is something that should be eliminated. A great deal more must be done to let the public know that these owls are rare, valuable and legally protected. In December, 1968, in Manitoba, one person was prosecuted and fined $50.00 and costs under The Wildlife Act for shooting a Great Gray Owl. In this case, a Conservation Officer found a hunter in the field with the freshly shot bird. Some birds, suspected of having been shot, were also seized during the influx period, the holders, for lack of clear evidence of guilt, not being charged.

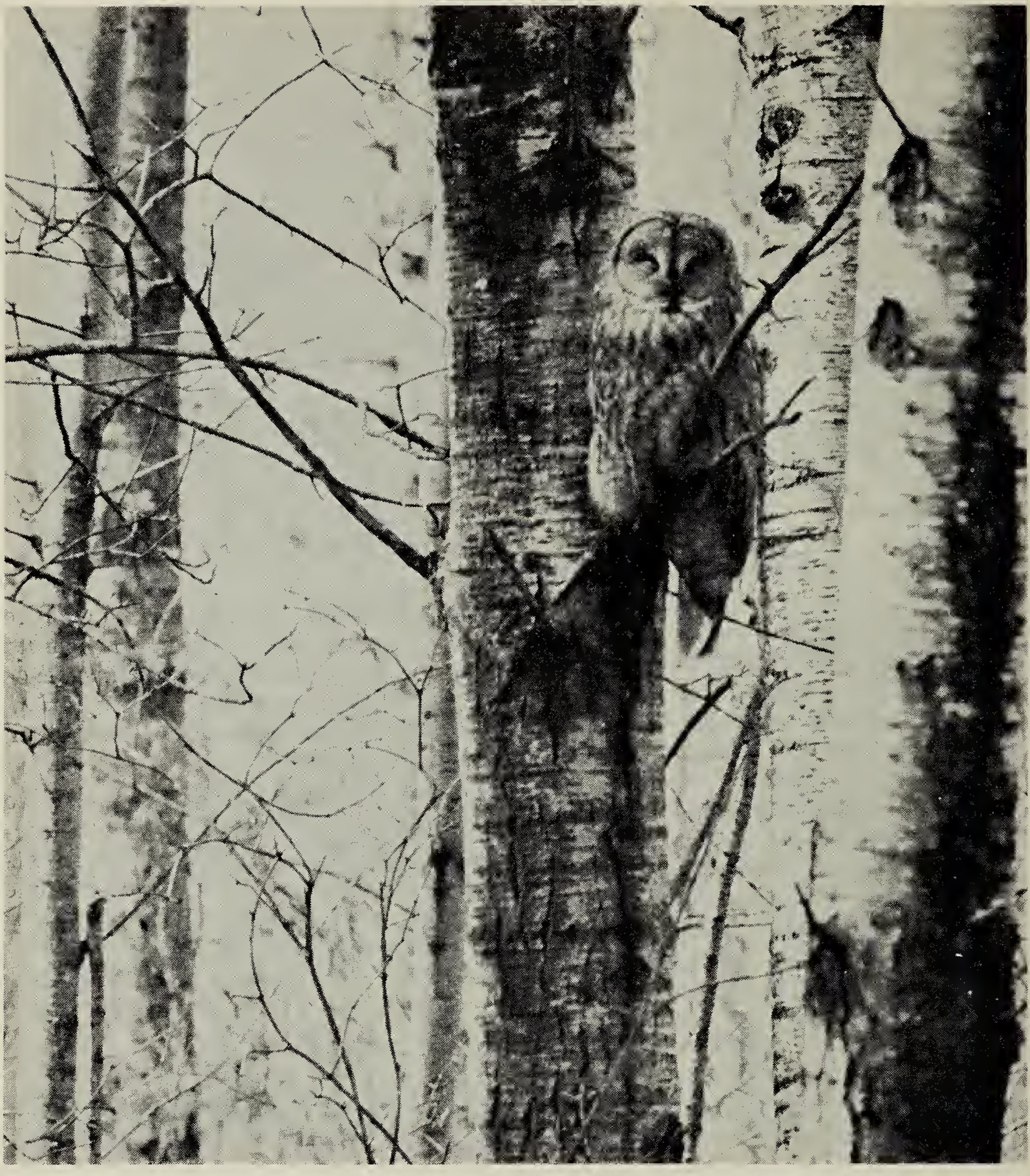
Taxidermists mounted a number of Great Gray Owls for people who reported finding them dead during the influx period. Persons wishing to have a protected bird mounted are required to apply in writing (and taxidermists are required to so advise them) to the Wildlife Branch of the Manitoba Department of Mines and Natural Resources for a permit. In some cases, permission to have a bird mounted seems to have been granted by field staff. Where possible, such birds are supposed to be examined, to see if they have been shot, but this is not always done. Permits have been issued without anyone other than the taxidermist having seen or identified the bird. Departmental records of permits issued for this purpose in some cases failed to give an exact identification, e.g., "owl" appeared on one, "black owl" on another.

Release of banded owl.
Note the long legs and small feet.

Local taxidermists often went to some effort to provide us with carcasses and data on Great Gray Owls being handled by them (though some records were unfortunately vague or even mixed), but they are not required to do so. The whole aspect of having protected birds mounted should come under tighter regulations. There is little doubt that the Golden Eagle or Great Gray Owl in the taxidermist's shop window encourages hunters to seek these trophies. Birds that die from starvation or collision or those found shot or confiscated could be mounted and used for educational purposes in schools or by conservation groups. But there is no reason why rare or protected birds should any longer be preserved as trophies or curiosities in private homes.

Acknowledgments

Thanks are due the numerous persons listed in Table 1, who contributed records from previous years, and those listed in Table 2 who observed Great Gray Owls in 1968-69 and whose records provide much of



Photos by R. R. Taylor

Great Gray Owl concealment posture. Facial and body plumage patterns blend with balsam poplar trunk.

the basis for this report. The latter list includes staff from the Canadian Wildlife Service, the Wildlife Branch and Regional Offices, Manitoba Department of Mines and Natural Resources, and the Parks Branch, Manitoba Department of Tourism and Recreation. In addition to those listed, I am grateful to M. Bilan, G. S. Parsons, E. Sainsbury, R. Squires, and M. S. Thorvaldson, Wildlife Branch and Regional Offices. Assistance in various ways was provided by J. C. Barlow, Mrs. E. Chapman, K. Gardner, W. E. Godfrey, V. Guarino, K. Hawkins, H. Hosford, Dr. S. L. Iverson, Miss H. Johnson, A. Kelner, A. D. Kelner, E. Kempf, T. A. Laine, H. Mossop, Dr. M. Ray, A. Ruest, R. W. Sutton, R. Telesky, B. N. Turner, R. J. Walker, S. Waller, and D. W. A. Whitfield.

Particular thanks are extended to W. H. Beck, who identified the contents of owl pellets and stomachs. M. Miller assisted in the preparation of the latter material. H. W. R. Copland and R. R. Taylor deserve credit for their boundless enthusiasm and energy in pursuit of owls. Herb Copland also drew the figures and assisted in searching for published records. Bob Taylor directed the banding and photographic operations. His photographs say more than any of us can about the beauty and enchanting character of the Great Gray Owl.

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SOME OBSERVATIONS OF THE KNOT ON OLD WIVES AND LAST MOUNTAIN LAKES

by **Fred G. Bard** and **Fred W. Lahrman**, Saskatchewan Museum of Natural History

The articles by Martin K. McNicholl (*Blue Jay*, 27:28-35; 83; 147-8) referring to prairie records of the Knot *(Calidris canutus)* have prompted us to submit some further observations of this bird. It is of interest, first of all, that the Saskatchewan Museum of Natural History has a number of specimens taken at Last Mountain and Old Wives Lakes (see Table 1).

Table 1. SMNH specimens of Knot taken at Last Mountain and Old Wives Lakes.

Place taken	Date taken	Spec. No.
Last Mountain Lake (Imperial Beach)	May 27, 1924	#1623
Last Mountain Lake (Imperial Beach)	May 18, 1949	#5073
Last Mountain Lake (Imperial Beach)	May 20, 1949	#5081
Last Mountain Lake (Imperial Beach) (several flocks of 30 seen)	May 20, 1949	#5084
Last Mountain Lake (Imperial Beach)	May 23, 1949	#5374
Last Mountain Lake (Imperial Beach)	May 23, 1949	#5389
Last Mountain Lake (Imperial Beach)	May 27, 1949	#4997
Old Wives Lake	May 23, 1925	#1783
Old Wives Lake	May 23, 1925	#1785
Old Wives Lake	May 31, 1925	#1784

As shown in the table, the birds collected at Last Mountain Lake for the Museum were taken at Imperial Beach. During the period from May 19 to May 27, 1949, when we were collecting specimens there, flocks of Knots were observed regularly and we found them to be more plentiful than the Ruddy Turnstones. On May 30, however, Lahrman observed only two Knots, although the last of the Black-bellied Plovers did not depart until June 5 (when two flocks of approximately 30 birds each were observed flying northwest).

On May 22, 1952, on the east shore of Last Mountain Lake, west of Govan, Lahrman found Knots and Ruddy Turnstones to be very plentiful. Here during the following years he observed Knots on different occasions during the latter part of May. On May 27, 1969, while photographing shorebirds near Imperial Beach, he obtained several photos of Knots, at which time several small flocks of three to six individuals, and two or three singles were noted.

On the shores of Last Mountain Lake we have seen Knots only near Valeport, Govan and Imperial Beach, and only during the spring migration period. The Knot appears to be a fairly common spring migrant here.

On May 27, 1969, when Lahrman was photographing Knots at Last Mountain Lake, Bard observed eight Knots near the cutbanks on Old Wives Lake. Several shorebirds were seen feeding along the shore, too far out for the 8 x40 binoculars, but with the tripod and 20 X scope each bird could be observed and identified (except for the confusing "peeps"). Watching the Knots in this location recalled several specimens that had been taken for the Chicago Museum in this area by Ashley Hines. Two of our SMNH specimens from this area were taken by Hugh McCrae of Crestwynd.

We have found the Knot to prefer the open, sandy or rocky points which jut out into the lake (particularly at Last Mountain Lake), and we note that they are often seen with Sanderlings, Ruddy Turnstones and Black-bellied Plovers, although larger flocks of Knots tend to keep to themselves.

ANNUAL MAY-DAY BIRD COUNT, SASKATOON

by **J. F. Roy,** 120 Maple Street, Saskatoon

This year, 49 observers (seven more than in any previous year) in nine parties established a record of 157 species, 11 more than on May 25, 1968, when 42 observers recorded 146 species. As more observers get out in the field and leaders become increasingly familiar with the area, the species total continues to climb. The table below provides a summary of the May-day counts since their inception in 1957. Note the change in area covered since 1961. The count is now taken in a square block consisting of 100 townships (3,600 square miles) centering on Saskatoon.

Summary of May-day counts in Saskatoon area

Date	Area covered	No. of Observers	No. of Parties	No. of Species
May 26, 1957	Circle, 7½ mile radius	24	4	104
May 25, 1958	”	14	4	88
May 24, 1959	”	13	4	112
May 23, 1960	”	14	3	99
May 22, 1961	”	21	4	100
May 26, 1962	Circle, 25 mile radius	24	5	127
May 18, 1963	Study area, 3600 sq. mi.	25	5	137
May 23, 1964	”	20	4	129
May 15, 1965	”	22	?	137
May 14, 1966	”	31	7	140
May 27, 1967	”	29	6	145
May 25, 1968	”	42	8	146
May 24, 1969	”	49	9	157

Last year we attempted to count all individuals of 18 species and the first 25 of every other species. This year, in an effort to simplify the counter's task, we made a full count of only nine species: Mountain Bluebird, Common Crow, Eastern Kingbird, Western Kingbird, Black-billed Magpie, Horned Lark, Western Meadowlark, Short-eared Owl, Robin, and Loggerhead Shrike. For every other species counting stopped when a total of 25 individuals was reached, except that all flocks of 50 or more were recorded. The only species for which any kind of valid comparison of numbers can be made are those which numbered fewer than 25 in both years, and the bluebird, crow, Eastern Kingbird, Western Kingbird, magpie, meadowlark and shrike, which were completely counted in both 1968 and 1969.

For the first time, each of the participating parties was asked to make a water-area count, a modest beginning in the attempt to measure at least one kind of habitat, in this instance that suited to young water birds. Each group counted all water areas (including streams, dugouts and borrowpits) visible within 110 yards on either side of a 24-miles stretch of all-weather road. We hope to continue this type of count, perhaps extending it in 1970 to include groves of trees along a similar length of road.

Records of interest this year include the sighting of two Common Loons, 34 Western Grebes (compared with 12 last year), and 23 Bufflehead, all of them species likely to be seen more often now that reservoirs like Blackstrap and Brightwater are full. A marked increase in Short-eared Owl

(32 compared with one in 1968) and Marsh Hawk population (96 compared with 53 in 1968) is indicated. Six hawk nests (two Cooper's, two Red-tailed and two Marsh) and ten owl nests (four Great Horned, four Long-eared, one Short-eared and one Saw-whet) were recorded on the day of the count. Among the shorebirds were several rarities: two Piping Plovers, eight Knots (including a flock of seven in the NW quadrant), two Dunlins and 25 Buff-breasted Sandpipers. 1450+ Northern Phalaropes were seen, including more than 1,000 in the NE quadrant. A marked reduction in Lark Buntings is apparent, five being noted compared with 210+ in 1968. Only one Downy Woodpecker was counted, and not a single Black-capped Chickadee turned up on the count (although family groups were again in evidence by late June). The two Red-breasted Nuthatches were unusually late. Despite the impressive number of species recorded, no new records were added to the regional list.

Weather (May 24, 1969): Temperature at 5:00 a.m. 48°F; high during the day 73°F; at 8:00 p.m. 51°F. Sky cloudy, averaging 7/10 cover during the day. Wind SSE 10- 15 mph.

SPECIES LIST

Common Loon, 2; Red-necked Grebe, 4; Horned Grebe, 102 + (3 nests); Eared Grebe, 35 (1 nest); Western Grebe, 34; Pied-billed Grebe, 13; Double-crested Cormorant, 2; Great Blue Heron, 4; American Bittern, 1; Whistling Swan, 1; Canada Goose, 5; Mallard, 222 + (3 nests, 8 broods); Gadwall, 82 + (1 nest); Pintail, 220 + (1 nest, 4 broods); Green-winged teal, 53+; Blue-winged teal, 170 + (2 nests); American Widgeon, 142+; Shoveler, 203+; Redhead, 84; Ring-necked Duck, 22; Canvasback, 106+; Lesser Scaup, 165+; Common Goldeneye, 6; Bufflehead, 23; Ruddy Duck, 111+; Common Merganser, 1; Sharp-shinned Hawk, 1; Cooper's Hawk, 5 (2 nests); Red-tailed Hawk, 17 (2 nests); Swainson's Hawk, 19; Rough-legged Hawk, 2; Marsh Hawk 96 (2 nests); Pigeon Hawk, 3; Sparrow Hawk, 8; Ruffed Grouse, 7 (1 nest); Sharp-tailed Grouse, 83+; Ring-necked Pheasant, 12; Gray Partridge, 36; Sandhill Crane, 5; Sora, 28; American Coot 182+ (46+ nests); Piping Plover, 2; Killdeer, 118+ (1 nest); American Golden Plover, 15; Black-bellied Plover, 123+; Ruddy Turnstone, 27+; Common Snipe, 3; Long-billed Curlew, 2; Upland Plover, 6; Spotted Sandpiper, 46; Solitary Sandpiper, 1; Willet, 60+; Greater Yellowlegs, 1; Lesser Yellowlegs, 11; Knot, 8; Pectoral Sandpiper, 72; White-rumped Sandpiper, 17+; Baird's Sandpiper, 14+; Least Sandpiper, 4+; Dunlin, 2+; Dowitcher, 4; Stilt Sandpiper, 347+; Semipalmated Sandpiper, 236; Buff-breasted Sandpiper, 25+; Marbled Godwit, 59; Sanderling, 28+; Avocet, 287 (6 nests); Wilson's Phalarope, 246+; Northern Phalarope, 1450+; California Gull, 22; Ring-billed Gull, 75+; Franklin's Gull 135+; Common Tern, 12; Black Tern, 537+; Rock Dove, 84+; Mourning Dove, 85+; Great Horned Owl, 6 (4 nests); Burrowing Owl, 1; Long-eared Owl, 8 (4 nests); Short-eared Owl, 32 (1 nest); Saw-whet Owl, 1 (1 nest); Common Nighthawk, 9; Ruby-throated Hummingbird, 1; Belted Kingfisher, 1; Yellow-shafted Flicker, 55 (2 nests); Yellow-bellied Sapsucker, 6 (1 nest); Hairy Woodpecker, 3; Downy Woodpecker, 1; Eastern Kingbird, 94; Western Kingbird, 39; Eastern Phoebe, 1; Least Flycatcher, 95+; Western Wood Pewee, 3; Olive-sided Flycatcher, 1; Horned Lark, 238+; Tree Swallow, 275+ (50 nests); Bank Swallow, 230+; Barn Swallow, 184+; Cliff Swallow, 7; Blue Jay, 4; Purple Martin, 4; Black-billed Magpie, 278; Common Crow, 633 (2 nests); Red-breasted Nuthatch, 2; House Wren, 64+; Long-billed Marsh Wren, 1; Short-billed Marsh Wren, 1; Catbird, 13; Brown Thrasher, 53; Robin, 151 (1 nest); Hermit Thrush, 1; Swainson's Thrush, 25; Gray-cheeked Thrush, 4; Veery, 6; Mountain Bluebird, 71 (1 nest); Sprague's Pipit, 14; Loggerhead Shrike, 71; Starling, 144+ (4 nests); Red-eyed Vireo, 3; Warbling Vireo, 38; Tennessee Warbler, 8; Orange-crowned Warbler, 2; Yellow Warbler, 130+; Myrtle Warbler, 5; Northern Waterthrush, 1; Mourning Warbler, 3; Yellowthroat, 9; American Redstart, 1; House Sparrow, 174+ (1 nest); Bobolink, 16; Western Meadowlark, 683; Yellow-headed Blackbird, 194+; Red-winged Blackbird, 236+; Baltimore Oriole, 70; Brewer's Blackbird, 196+; Common Grackle, 30; Brown-headed Cowbird, 258+; Rose-breasted Grosbeak, 7; American Goldfinch, 87+; Rufous-sided Towhee, 44+; Lark Bunting, 5; Savannah Sparrow, 108+; Grasshopper Sparrow, 1; Baird's Sparrow, 15; LeConte's Sparrow, 3; Vesper Sparrow, 119+; Lark Sparrow, 5; Slate-colored Junco, 1; Chipping Sparrow, 101+; Clay-colored Sparrow, 170+; White-crowned Sparrow, 4; White-throated Sparrow, 23; Lincoln's Sparrow, 2; Song Sparrow, 98+; McCown's Larkspur, 11; Lapland Longspur, 1050± Chestnut-collared Longspur, 53+.

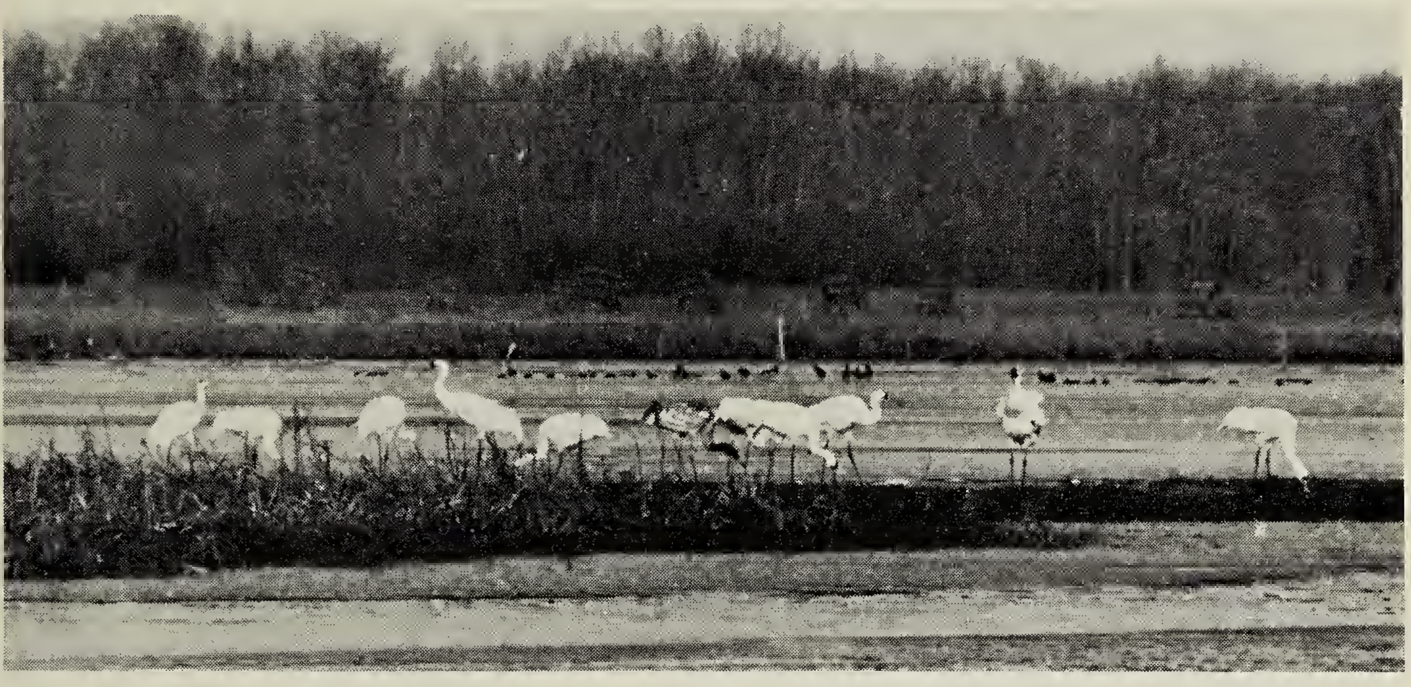
CHRISTMAS BIRD COUNT 1969

List the number of each bird species seen on the ONE BEST DAY between Saturday, December 20, 1969 and Thursday, January 1, 1970 (inclusive). In addition, list other species observed during the above dates. See March 1969 *Blue Jay* for other details. Send reports as soon as possible to

Mrs. Mary Houston,
863 University Drive,
Saskatoon.

WHOOPING CRANE AT GLASLYN, SASKATCHEWAN, 1969

by **Fred W. Lahrman** and **Lorne Scott,** Saskatchewan Museum of Natural History



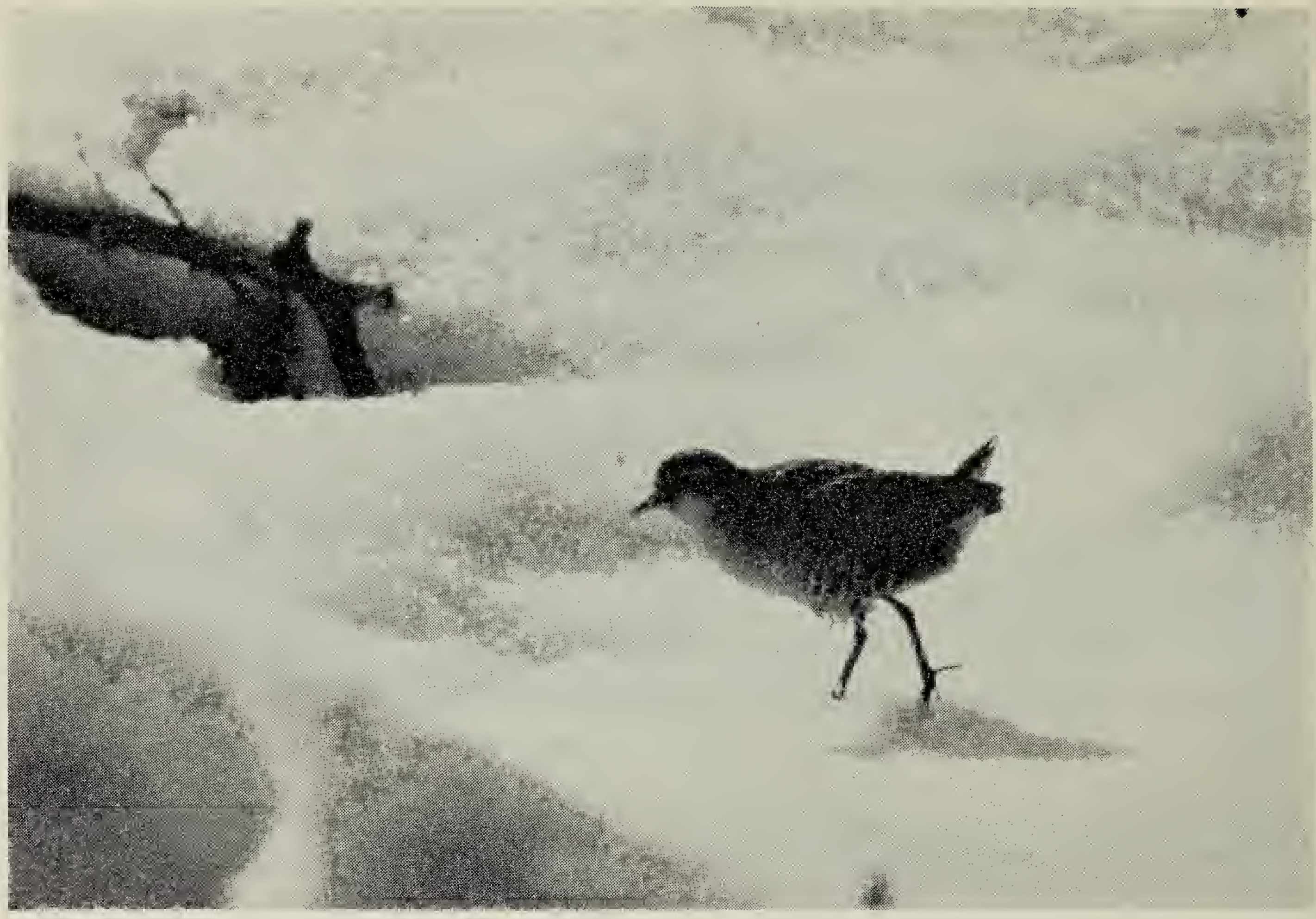
Saskatchewan Museum of Natural History Photo

This unusual photograph of 11 Whooping Cranes was taken on October 15, 1969, near Glaslyn, Saskatchewan. The cranes, first seen in the area on October 11, were reported to the Museum by Grant Fladager, Regional Supervisor, Meadow Lake, and we came up from Regina to field check the report. We arrived in Glaslyn about 9:30 p.m., where we met the Conservation Officer, Glen Vilness, who gave us further information about where the cranes had been seen. Early the following morning we set out to check Midnight Lake, approximately seven miles north of Glaslyn, and the nearby stubble fields. At 9:30 a.m. we found the group of 10 adults and one juvenile in a field of swathed grain. At 10:50 a.m. the cranes left the field and, flying southwest towards the lake, started circling and calling. They quickly gained altitude, and I feared that they were leaving, but they glided back down to land on the lake. Here we had an excellent view of them, and were able to get good photographs from as close as 200 yards, in good light. The Whoopers were grouped fairly close together, standing on the ice and resting and preening. As they walked they often flipped their wings to maintain their balance on the thin, slippery ice.

Towards 2:00 p.m. the cranes began wandering about searching for food in the open patches of water, and the parents were observed feeding the young several times. The family group walked away from the rest of the group, and made a short flight to the east shore. The others followed on foot. At 3:15 p.m. the family group took to the air again, heading northwest towards the fields, and they were again followed shortly afterwards by the others. Near the west side of the lake they started soaring again, and soon re-united in one group. Then they were seen to alight in the distance and were found to have settled near their morning location. Before returning to Regina, we stayed at the lake until it became dark at 7:00 p.m., hoping for their return, but the cranes did not come back. However, a radiogram from Grant Fladager reported that the cranes were still in the area on October 20.

EARLY ARRIVAL DATE FOR SORA

by **Ronald L. Dutcher,** Park Naturalist, Prince Albert National Park



This note reports a new early arrival date for the Sora *(Porzana carolina)* in Saskatchewan, and records its occurrence under unusual circumstances.

The Sora breeds throughout Saskatchewan (W. E. Godfrey. 1966. *The Birds of Canada*) and is common in the marshy areas of Prince Albert National Park (J. D. Soper. 1952. *The Birds of Prince Albert National Park, Saskatchewan*). It is closely associated with marshes, and I was therefore surprised to see one walking along the road near the Heart Lakes Hatchery canal on April 8, 1969. The circumstances were particularly unusual because there was no open water in the park, and, with the exception of roads opened by the snow plough, the ground was deeply snow-covered.

The earliest record of a Sora I can find for Saskatchewan is April 18, 1952 at Regina (M. Belcher, 1966. *Birds of Regina*). The early spring of 1969 began with a warming trend on April 4, and for the following week daily highs varied from 52 to 65° F, and lows from 22 to 36°F. On April 8 the high and low temperatures recorded at Waskesiu were 57° and 30°F (Waskesiu Climatological Station Report, April 1969). The morning was clear with west winds at 5 m.p.h.; in the afternoon it was partly cloudy and calm. The Sora was walking along a snow-free patch of ploughed road in the early afternoon, occasionally pecking at something. When I approached in a station wagon, the Sora fluttered a few feet and continued walking and pecking. I approached more closely, and the Sora flew up and walked along a roadside bank. After taking five photographs I left, and on returning later in the day was unable to find it. This early record is especially interesting because all lakes and marshes were completely frozen at the time.

SIGHT RECORDS FOR THE YELLOW-BREASTED CHAT IN SOUTHWESTERN MANITOBA

by **John Lane** and **Wayne Miller,** Brandon, Manitoba

Although there appear to be no published records for the Yellow-breasted Chat *(Icteria virens)* in southwestern Manitoba, at least three sightings have been made in that part of the province during the past 50 years. In one June in the early 1920's, while tramping in the Brandon Hills south of Brandon, the senior author traced a loud medley to its source and saw his first Chat. On May 22, 1966, Miller noted a male of this species flitting through the bush on the west side of Sewell Lake. This bird was silent and soon disappeared.

On June 12, 1968, we shared a third sighting of the Yellow-breasted Chat along the Souris River west of Bunclody bridge. While engaged in a fruitless search for a pair of Orchard Orioles reported a week earlier by Mr. W. Cowan and Mrs. H. Watson, we were attracted to an area just south of the river by repeated outbursts of unusual bird notes. We quickly spotted a male Yellow-breasted Chat singing from the top of a dead aspen which overlooked a small fen surrounded by a tangle of deciduous growth. He appeared to be singing on territory and we believed there was a good chance that a nest might be found. A cautious search of the underbrush resulted in two sightings of the female Chat.

On June 15 we returned to the area and found the male Chat still singing from the tip of the dead aspen and as we watched he gave a display of the famous flight song, in which he left his perch and towered to a considerable height, singing all the while. When he reached his highest point he hovered there until the song ended, then dropped straight down and regained his perch.

A third visit to the site on June 18 revealed no sign of the Chats, and subsequent searches were without result. One trip to the area in early June, 1969, in search of this species was also fruitless.

EDITOR'S NOTE: The Manitoba Museum of Man & Nature has the following Yellow-breasted Chat records on file: Pilot Mound, May 29, 1929, Mrs. J. E. Hunt; Hillside Beach (Lake Winnipeg), June 27, 1933, F. J. Rogers; Whitemouth, August 13, 1933, V. Latta; Souris August 21, 1945. G. Willets; and Delta, July?, 1948 (reported to R. W. Sutton). So far as is known, a specimen is still lacking for the province.

NINTH ANNUAL REPORT OF THE BRANDON JUNIORS' NESTBOX PROJECT

by **David Randall** and **John Lane,** Brandon, Manitoba

The nesting season in 1969 showed a continuation of the remarkable increase in Mountain Bluebirds *(Sialia currucoides)* while Eastern Bluebirds *(Sialia sialis)* failed to make any appreciable gain over the 1968 totals reported to the *Blue Jay* by Brian Cutford (*Blue Jay*, 26:4). As usual, Mountain Bluebirds were back by mid-March, despite snowstorms and below-zero temperatures. By April 29 they were building nests, the first egg noted May 2. By such early starts, second broods are feasible and we estimate over 50 per cent of this species raise a second brood. Our latest date for vacating of the nest by Mountain fledglings was August 17. A few early Eastern Bluebirds had begun nesting by May 15 and the first egg was noted May 18, but mated pairs were still appearing locally in early June. Our latest date for vacating by young was August 25. Very few second broods appear to be attempted by this species in these northern regions.

Again this season we observed several unusual occurrences on our nestlines: nestbox #516, on the C.P.R. just east of Sidney, was home for a litter of three Red Squirrels *(Tamiasciurus hudsonicus)*, but the mother moved her family to safer quarters after we took the young from the nest to photograph them. Deer Mice *(Peromyscus maniculatus)* usually take over the nest boxes in the autumn, but in June, 1969, we found a Deer Mouse nest in nestbox #544, which only a week earlier had been in the possession of a pair of Eastern Bluebirds. Three bluebird eggs were found intact under the mouse nest. Nestbox #88, smashed to the ground by vandals, was occupied in this unusual position by a pair of Mountain Bluebirds and a set of five eggs laid. We replaced the nest atop a fencepost, but were obliged to leave it on its side so as not to spill the eggs. The family was safely raised.

On at least six occasions this year we found mated pairs of Mountain Bluebirds quietly perched on the high wire along a road, with no possible nest available. As soon as we took a nestbox from the car they showed an excited interest, and in every case the nest was scarcely nailed up before the male was at the entrance. Is it possible that these are locally-raised birds, with no instinct to go farther north in spring migration?

Starlings *(Sturnus vulgaris)* which have never been an important statistic in our nestbox totals, showed a marked increase this season, nine nestlings being listed. The last three starling nests found held families of dead young. Possibly this species is finding it difficult to cope with natural enemies in the wild and the parent birds are falling victims to predators while food-hunting for their young.

During the Easter vacation, 1969, we ran a new nestline north from Brandon, then east past Minnedosa and through Neepawa to Gladstone, then south to Austin on Highway No. 1. A total of 100 nest boxes was set out and we later listed nine Mountain and three Eastern Bluebird nestings, which is an excellent start for a new line. This brings our total of nestboxes to 2100, but we estimate that 100 of these are no longer active for one reason or other.

Nesting totals for 1969

Mountain Bluebirds (first broods)	350
Eastern Bluebirds (first broods)	65
Tree Swallows (estimated)	1200
House Wrens	25
House Sparrows	20
Starlings	9
Deer Mice	35
Red Squirrel	1

RED-HEADED WOODPECKER IN THE KANANASKIS VALLEY

by **William J. Merilees**, Biology Department,
Selkirk College, Castlegar, B.C.

One mile south of the Trans-Canada Highway on the Kananaskis to Coleman Forestry Road one Red-headed Woodpecker was seen on June 27, 1969. The bird, in full adult plumage, was sitting on a roadside fence post. No other individuals of this species were seen, though a brief search was made.

Salt (*The birds of Alberta*, second edition, 1966) gives the closest record as 20 miles west of Turner Valley, approximately 30 miles south southeast. Although this not an exceptional record, it is worth documenting as the range and status of this species may be changing.

APOLOGIES!

We are sorry that we had to raise the membership fee and we hope you won't think of dropping the Blue Jay. Use tear-out page and renew promptly and urge others to join us.

THE PRESENT STATUS OF DOUBLE-CRESTED CORMORANT COLONIES IN MANITOBA

by **Kees Vermeer,** Canadian Wildlife Service, Edmonton

McLeod and Bondar (1953) made a thorough field survey of nesting colonies of Double-crested Cormorants, *Phalacrocorax auritus,* at Lake Winnipegosis, Manitoba. They counted 9862, 5949, and 4656 nests in 1945, 1950 and 1951 respectively. Although they found that the cormorant diet was composed of only 7.2 per cent commercial fish, they nevertheless thought the number of cormorants to be excessive, and eggs and young were destroyed on a large scale in order to reduce the population.

The objective of my study was to compare the present breeding population at Lake Winnipegosis with that observed by McLeod and Bondar 18 years ago, as well as to investigate the distribution and size of all colonies in Manitoba.

Methods

The colonies were surveyed by float plane in 1969. In order to curb costs of flying, nest counts of many small colonies were done from the air. A few, and probably small, colonies may have

Photo by Harold Hosford

Young cormorants on island in West Shoal Lake, Manitoba, 1959.

been missed as the survey was not exhaustive. The survey was made when the eggs started to hatch to insure a maximum count of nests. The visits were made as quickly as possible and in mild weather to keep effects of human intrusion to a minimum.

Results and discussion

Figure 1 depicts the active nesting colonies of Double-crested Cormorants in Manitoba in 1969. The numbered colonies in Figure 1 are identified in Table 1. The total was 4772 nests. As the laying season of cormorants in the prairie provinces can last two and a half months (Vermeer, in press), an unknown number of clutches, initial as well as replacement, were probably initiated after the counts. Considering that late initial clutches plus a few, and probably small, colonies may have been missed, the total breeding population in Manitoba was estimated to consist of 10,000 birds. From Table 1 it can be seen that Lake Winnipegosis with 1403 nests had the largest breeding population in Manitoba. As McLeod and Bondar (1953) counted 4656 nests there in 1951, it can be seen that the population has declined to less than one-third over the past 18 years. The destruction of eggs and young by these authors may have caused a decline in the years immediately after. But the breeding population, in the

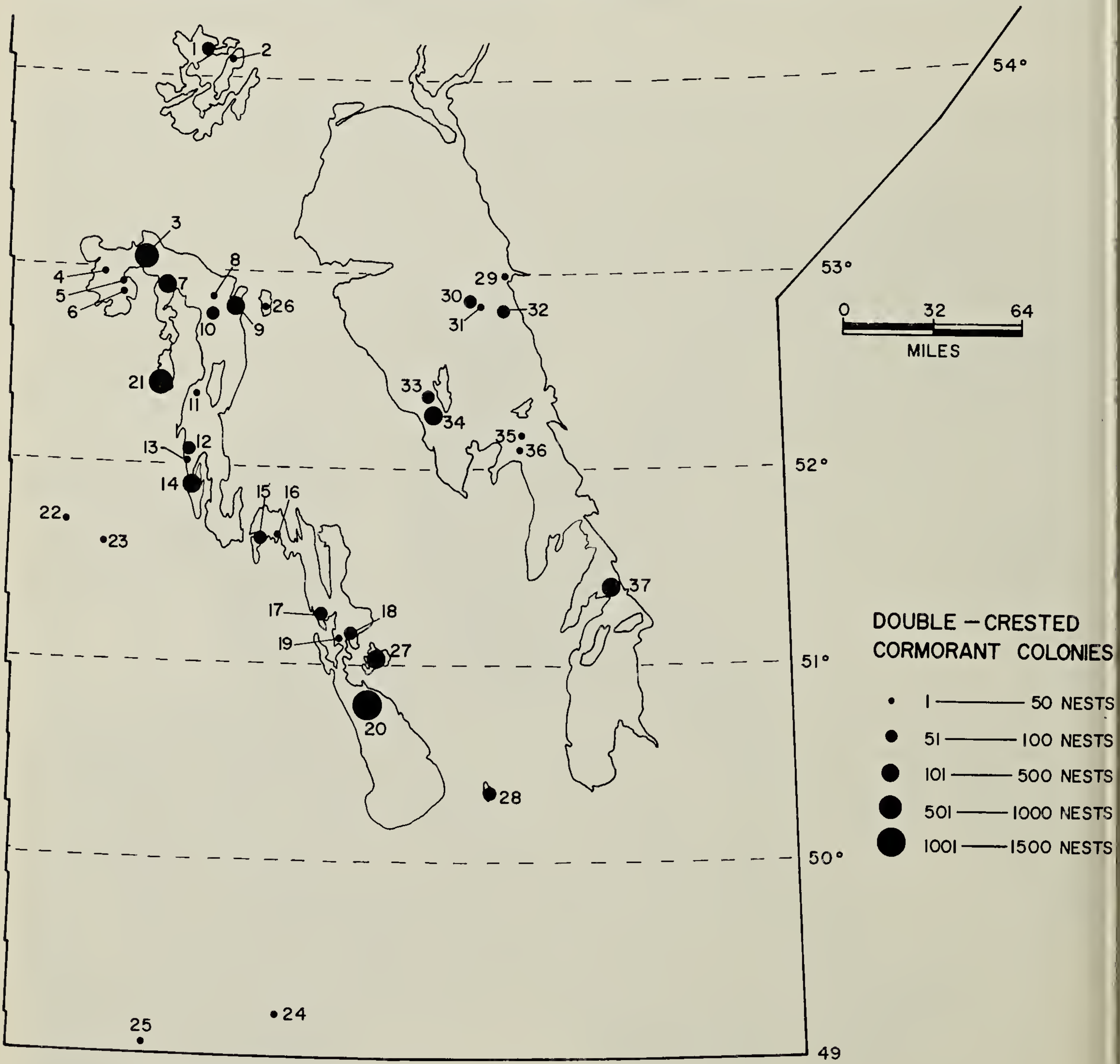


Figure 1. Distribution and size of Double-crested Cormorant colonies in Manitoba in 1969.

Table 1. Number of nests and location of active colonies of Double-crested Cormorants in Manitoba

Colony Location	Latitude	Longitude	No. of nests
1. Moose Lake — 2 reefs	54° 09′N	100° 04′W	58*
2. Talbot Lake — 1 reef	54° 07′N	99° 53′W	28*
Lake Winnipegosis			
3. Reef east of Spruce Isl.	53° 04′N	100° 30′W	645*
4. Reef east of Rowan Isl.	52° 58′N	100° 53′W	40
5. Vance Reef	52° 55′N	100° 44′W	10
6. Reef northwest of Mason Isl.	52° 53′N	100° 43′W	12
7. Reef west of Whisky Jack Isl.	52° 55′N	100° 20′W	155*
8. Reef north of Cormorant Isl.	52° 52′N	99° 56′W	40
9. Reef southeast of Denbeigh Pt.	52° 49′N	99° 46′W	171*
10. Reef north of Pemmican Isl.	52° 47′W	100° 00′W	97*
11. Reef south of Sealey Isl.	52° 20′N	100° 05′W	8
12. Reef northeast of Gamblers Pt.	52° 04′N	100° 07′W	ca 60
13. Reef northeast of Gamblers Pt.	52° 03′N	100° 08′W	30
14. Reef south of Coleman Isl.	51° 55′N	100° 03′W	135*
Lake Manitoba			
15. Reef south of South Twin Isl.	51° 38′N	99° 28′W	79*
16. Reef northwest of Little Sandy Pt.	51° 39′N	99° 20′W	8
17. Reef northwest of Reykjavik	51° 15′N	98° 59′W	87*
18. Reef north of Richard Pt.	51° 09′N	98° 45′W	88*
19. Reef west of Richard Pt.	51° 08′N	98° 48′W	3
20. Island southwest of Duck Isl.	50° 49′N	98° 37′W	1010*
21. Pelican Lake — 3 islands	52° 25′N	100° 20′W	802*
Duck Mountain Provincial Park			
22. Edge of unnamed pond	51° 46′N	101° 08′W	10
23. Edge of unnamed pond	51° 37′N	100° 45′W	25
24. Edge of Rock Lake	49° 13′N	99° 15′W	3
25. Sharpe Lake — 1 island	49° 02′N	100° 20′W	18
26. Kawinaw Lake — 1 island	52° 50′N	99° 29′W	4*
27. Dog Lake — 1 reef	51° 02′N	98° 30′W	175*
28. East Shoal Lake — 1 reef	52° 22′N	97° 36′W	ca 60
Lake Winnipeg			
29. Reef north of Poplar Pt.	52° 59N′	97° 32′W	5
30. Reef northwest of George Isl.	52° 51′N	97° 43′W	ca 75
31. Reef northwest of George Isl.	52° 50′N	97° 40′W	7
32. Reef southeast of George Isl.	52° 48′N	97° 30′W	ca 70
33. Reef west of Reindeer Isl .	52° 22N′	98° 04′W	72*
34. St. Martin Isl. — 3 reefs	52° 17′N	98° 01′W	407*
35. Reef southeast of Johns Isl.	52° 11′N	97° 20′W	7
36. Reef west of Nut Isl.	52° 06′N	97° 22′W	8
37. Pipestone Rock — 3 reefs	51° 03′N	96° 32′W	260*
Total number of nests			4772

* Nest counts made on the ground (all other counts were made from the air).

absence of further harassment, should have recovered by recruitment and immigration over an 18-year period. The authors reported that prior to and during their survey fishermen and lumbermen also destroyed the eggs in several colonies. Large-scale destruction of cormorant eggs by fishermen occurred at Suggi Lake, Saskatchewan, 105 miles northwest of Lake Winnipegosis, as recently as 1964 (Carson, 1966). Since many cases of nest destruction undoubtedly go unreported, human disturbance may be a major cause behind the decline at Lake Winnipegosis.

Nesting colonies reported by McLeod and Bondar at Lake Atikameg and by Lewis (1929, 1931) at Chitek Lake, Pelican River and Cedar Lake were no longer present in 1969. The nesting site at Cedar Lake has presumably been flooded out since the construction of the Grand Rapids Dam.

In all colonies, except four, cormorants nested on the ground of mostly small, treeless islands and reefs. Cormorants nested in dead trees on a partly flooded island in Sharpe Lake. At two ponds in Duck Mountain Provincial Park and at Rock Lake, the birds nested in living trees along the lake shore. No bare islands or reefs appeared to be available for nesting purposes at those four locations. Cormorants nested in trees along the lake shore after their former nesting island became part of the mainland at Miquelon Lake, Alberta (R. Lister, pers. comm.). California Gulls, *Larus californicus*, nesting on islands separated from the mainland by very shallow-water channels in Alberta have been observed to be subject to extensive predation by coyotes, *Canis latrans* (Vermeer, 1967). The preference of cormorants for nesting on islands may be a mechanism directed against mammalian predation. From the observation of nesting colonies in shallow water such as Kawinaw Lake and East Shoal Lake, where fish are scarce (Dr. K. H. Doan, Chief Provincial Fishery Biologist, Manitoba, pers. comm.), close proximity of fish can be of less importance than an inaccessible nesting site. Besides availability of fish, inaccessibility of nesting sites, and human disturbance, another factor affecting the distribution of nesting colonies appears to be the fluctuation of water levels. Several colonies in Saskatchewan disappeared as a result of flooding and falling lake levels (Houston, 1962).

Summary

On the basis of a count of 4772 nests, the total breeding population of Double-crested Cormorants in Manitoba in 1969 was estimated to consist of 10,000 birds. Lake Winnipegosis, with 1403 nests, had the largest breeding colony. The population at that lake has declined to less than one-third over the past 18 years. In all colonies in Manitoba, except four, cormorants nested on the ground of mostly small, treeless islands and reefs.

Acknowledgments

The assistance of Dr. G. Adams and Mr. D. Hatch, Canadian Wildlife Service, in locating nesting colonies, is much appreciated.

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BONAPARTE'S GULL NESTING AT GLASLYN, SASKATCHEWAN, 1969

by **Fred W. Lahrman,** Saskatchewan Museum of Natural History

While working on nature trails at The Battlefords' Provincial Park in early 1969, Lorne Scott and I had an opportunity on June 17 to check the area where the Bonaparte's Gull had been found nesting in previous years on Lamotte's Swamp near Glaslyn (see **Blue Jay,** 26:70-74.)

We soon found a pair of Bonaparte's Gulls and a nest with three eggs. As we approached the nest, the pair dived at us with screaming cries and were soon joined by a third Bonaparte's Gull from a distant part of the marsh. We believe this third bird may have been one of a second nesting pair, but the gulls were fewer in numbers than in previous years.

We noticed that only two fence posts remained this year from an old fence line which ran through the nesting area. The gulls used these posts for perching on and as lookout sites while they guarded their nesting territory. We erected nine fence posts in the nesting area in the hope that they would encourage more birds to establish nesting territories in the coming years.

This beautiful and unique bay provided many other attractions, such as the Yellow Rails, Sharp-tailed Sparrows, Common Snipe in courtship displays, and nesting Canvasbacks. Shooting star flowers were blooming in profusion on the little hummocky islands.

At one time this swamp was named the Lamotte's Bird Sanctuary. For some reason it was removed from the list of sanctuaries. It is obvious that the sanctuary should be reinstated.

REPORT OF SUCCESSFUL 1969 BANDING OF BLUEBIRDS AND TREE SWALLOWS AT INDIAN HEAD

by **Lorne Scott,** Indian Head

Since 1963, I have been engaged in building and setting out bird houses to attract bluebirds in the Indian Head district.

This past spring I set out another 200 bird houses to bring the total to 750. Two new Bluebird Trails were established this spring: 100 houses were set out between Wolseley and Melville, Saskatchewan, and 50 were set out between Qu'Appelle and Lipton, Saskatchewan.

The two new trails proved very successful with only six out of the 150 houses unoccupied. Tree Swallows occupied most of the new houses. It seems to take two or three years before bluebirds become established in an area. There are now more bluebirds than Tree Swallows nesting in the first houses.

Again this year there were twice as many Mountain Bluebird nests as last year, the totals being 51 nests in 1968 and 104 this year. The Tree Swallows also showed a marked increase from 178 nests in 1968 to about 275 this year.

The highlight of the year was having two pair of Eastern Bluebirds nesting in the houses. This brought back memories from 1966 when there were two pair of Eastern Bluebirds nesting. In 1967 and again in 1968 no Eastern Bluebirds nested in the boxes.

The first nest was discovered in early June near Lemberg, Saskatchewan. Unfortunately vandals destroyed their nest shortly after the eggs hatched. The adults were not seen in

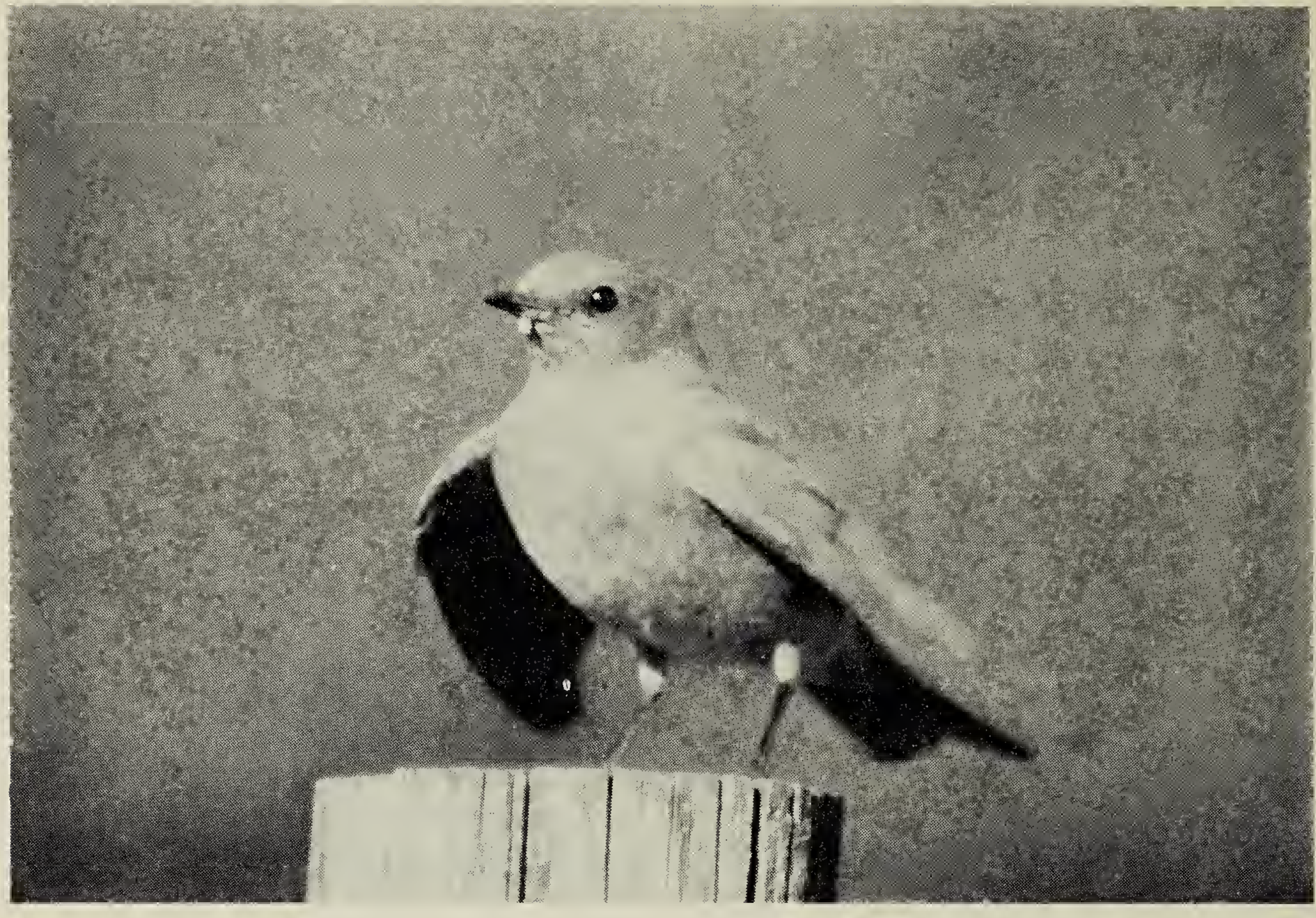

Photo by Fred W. Lahrman

Male Mountain Bluebird, Indian Head, 1969

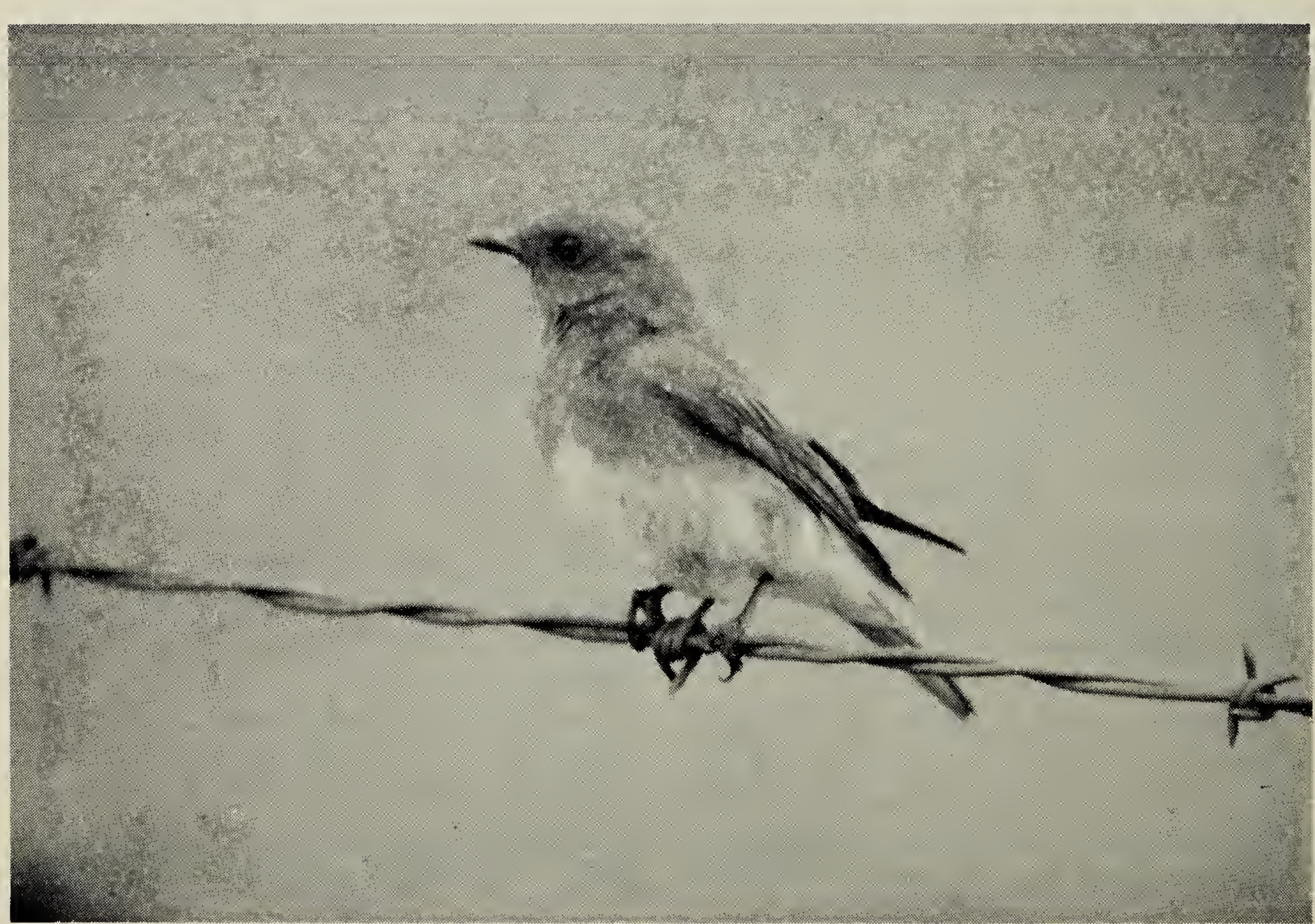

Photo by Fred W. Lahrman

Male Eastern Bluebird, Indian Head, 1969 the area again. The second nest was located south of Indian Head in July. This pair successfully raised four young.

This year I obtained a bird banding permit from the Canadian Wildlife Service. I banded 43 adult female Mountain Bluebirds which were caught on the nests in the houses. I also banded 351 young Mountain Bluebirds in the nests. Both adult female Eastern Bluebirds were banded as well as the four young in the successful nest. It will be interesting to see if these Eastern Bluebirds will come back to nest in the houses next year.

A total of 600 Tree Swallows were banded of which 125 were adults, largely females. This makes a total of 1,000 birds banded in the houses this year. As well as the records for the Canadian Wildlife Service, I have kept a list of all the band numbers with the corresponding bird houses in which each bird was banded. With these records I hope to answer several questions such as: Do the adults return to the same house to nest year after year? Do the young birds of the previous year nest when one year old and, do they return to the same area to nest? And how old do the birds live to be?

Next spring the Saskatoon Junior Natural History Society and I plan to join our Bluebird Trails around the north end of Last Mountain Lake. With the work done by Mr. Jack Lane and the Brandon Junior Bird Club we will then have a continuous trail extending from just west of Winnipeg, Manitoba, to Saskatoon, Saskatchewan.

A POSSIBLE SIGHTING OF THE PURPLE SANDPIPER IN SOUTHWEST MANITOBA

by **David Randall**, 561 - 7th Street,
Brandon, Manitoba

On May 25, 1969, while on a fishing trip to Pelican Lake in southern Manitoba, I noticed a small flock of Ruddy Turnstones *(Arenaria interpres)* feeding along the shore. I later found that this was part of a larger group, perhaps 50 birds in all. While studying these migrants through my 7 x 35 glasses I noticed one individual with a much different appearance than the rest. This bird was much darker than the Turnstones, with a mottled brownish back and wings a purplish-grey color; the breast was well spotted with darkish spots; the legs were bright yellow, as compared to the burnt-orange legs of the Turnstones.

The stranger stayed close to the other birds in the flock and whenever they flew it went right along. Only the Purple Sandpiper *(Erolia maritima)* seems to fit this bird in Peterson's *A field guide to the birds.* Godfrey (1966. *The birds of Canada*, National Museum of Canada, Bulletin No. 203), states that this species is considered accidental in southern Manitoba.

ORANGE-CROWNED WARBLER NESTS NEAR SASKATOON

by **R. E. Gehlert**, 1701 - 20th Street W.,
Saskatoon

The Orange-crowned Warbler *(Vermivora celata)* was added to Saskatoon's list of breeding birds when two nests were discovered near Pike Lake in 1969. Fred Waite and I found the first nest containing two warbler eggs and two cowbird eggs on June 23. The nest was located on the ground under a tuft of dry grass near the edge of a small clearing within a poplar bluff. The female showed little alarm while the nest was inspected but would flit nervously to the willows that bordered the clearing.

I found the second nest on June 29 about one mile away in a nearly identical situation. Both adults were seen carrying food to two large cowbirds ready to leave the nest. The nest was empty the following day.

I would like to thank Dr. Stuart Houston for pointing out the significance of these records. It appears that the only other breeding record for this species for Saskatchewan is of a nest found near Nipawin in 1936 (Houston and Street. 1959. *The birds of the Saskatchewan River, Carlton to Cumberland*).

A KANGAROO RAT COLONY IN ALBERTA

by **Hugh C. Smith** and **Michael J. Hampson**
Provincial Museum and Archives of Alberta, Edmonton

The Kangaroo Rat *(Dipodomys ordii)* collected by the U.S. Biological Survey at Medicine Hat in 1931 was the first recorded occurrence of this mammal in Alberta (Anderson, 1946: 131). This specimen was also the first recorded in Canada, although several records now exist for Saskatchewan. In 1958 Soper (1964:178) made an unsuccessful survey of the Empress-Hilda area in an endeavour to locate Kangaroo Rats after Nero (1956: 110) had reported them in 1956 to be within eight miles of the Alberta-Saskatchewan border at Mendham, Saskatchewan.

On June 23, 1969, while on a field trip sponsored by the Provincial Museum and Archives of Alberta, we came upon a colony of Kangaroo Rats approximately 30 miles southwest of Empress. Using the method described by Nero (1958:176) to capture Pocket Mice, we were able to collect seven specimens. These are now in the collection of the Provincial Museum. As well as the seven collected, 13 others were seen the same night. During the night of June 24-25 seven were sighted.

This colony was found along a weed-lined country road that ran through slightly rolling prairie. The vegetation cover of the surrounding land is principally grasses; however, some shrubs—sagebrush, wolf willow, and rose—are scattered over the area. Although most of this land is used for grazing livestock some has been brought under cultivation. No rats were found near the cultivated land; all the ones that we saw were on the road through the grassland.

Nero (1956:109) found the dens of the Kangaroo Rat in blow-out areas of sand dunes, and in association with the plant *Psoralea lanceolata.* In the colony that we found, there did not appear to be any preferences for plant associations, burrows being surrounded with sage, dandelion, blue bur, flixweed and grass. As there were no sand dunes in this area they apparently took the nearest substitute—the road grade and ditches. The sides of the road grade and to a lesser extent, the crown of the road, were used extensively for the burrows; the bottoms of the ditches and the outside banks of the ditches were used to a lesser extent. The surrounding grassland did not appear to be occupied.

There were no mounds associated with this colony. The holes were dug into the roadway and all excavated earth was removed from the vicinity of the hole. The opening of the holes was approximately four and one-half inches in diameter, and the holes were quite conspicuous.

Judging by the number of burrows the colony extended for approximately three miles along the road and was road-width wide.

The extent to which the Kangaroo Rat has become established in Alberta is not known at present. Soper (*loc. cit.*) believes that they may occur in likely habitat anywhere in southeastern Alberta, south of the Red Deer River. Now that they have been confirmed as an established member of the fauna of Alberta, reports of other findings will no doubt come to light.

In this connection two incidents should be mentioned. The first occurred shortly after we had found the above-mentioned colony. We were in conversation with two farmers in the Hilda area, and we asked them if they had ever seen any Kangaroo Rats. One of them replied that he had not, but that a friend of his had picked up an animal that he thought was a Kangaroo Rat. When asked as to when and where this had happened he said that is was "a couple of years ago now, and it was near the River."

The second report was from the Warner area. While we were stopped at the home of friends in Warner, our conversation eventually turned to the discovery of the Kangaroo Rat colony and to a discussion of how rare these animals were in Alberta. To our surprise the lady of the house stated that while she was working in the county office, a farmer had brought a strange looking animal into the office for identification. Apparently no one in the county office was able to identify it so they referred to some books for help. After a perusal of several books the only conclusion they could reach as to the identification of this animal was that it was a Kangaroo Rat. When we asked her where this animal had been picked up she was not sure but thought it was east of the town of Milk River.

With the publication of this note more reports may be forthcoming. If anyone knows of such a colony or of any sightings of Kangaroo Rats, the senior author would appreciate hearing from these people so that a more definite distribution pattern may be worked out for Alberta.

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Nero, R. W., and R. W. Fyfe. 1956. Kangaroo rat colonies found. Blue Jay, 14:107-110.

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COMMENTS ON THE RANGE OF THE NORTHERN POCKET GOPHER IN ALBERTA

by **Michael Wilson,** 196 Westover Drive, Calgary 5, Alberta

J. Dewey Soper (1964. *The mammals of Alberta.* Hamly Press, Edmonton) defined the range of one race of the Northern Pocket Gopher, *Thomomys talpoides talpoides* (Richardson), in Alberta as follows: "Sporadically throughout the aspen grove belt west to a line running from about Westlock southward through Stony Plain, Pigeon Lake, Rocky Mountain House, Sundre, Morley, Elbow Falls, Maycroft and Twin Butte to Belly River, Waterton Park; east to about Nanton and Blackie . . . " For three years I have made casual investigations of the distribution of this rodent in order to supplement Soper's data. Pocket Gophers or their burrows have been found at a number of localities which add to our knowledge of its distribution.

A heavy infestation, as evident from numerous fresh burrows, was observed from Cochrane west past the Jumpingpound Sulphur Plant, and at least to a point on Highway 1a one mile west of the Ghost River crossing. This agrees with Soper's data, which indicated Morley to be the western boundary of the range at this point.

Burrows were noted as fairly common in the immediate area of the University of Calgary Environmental Sciences Station at Barrier Lake, Kananaskis Valley. Zoology students at the centre in 1966 observed one live specimen. An incomplete skull (University of Calgary, Archaeology Colls., No. OS-329) was found by me two and one-half feet down in a cutbank of the Kananaskis River just north of its confluence with Ribbon Creek, and some distance south of the University Centre. It appears that the species exists in open areas *west* of the Moose Mountain dome, and adjacent to the Rocky Mountain Front Ranges.

Wayne W. Smith (pers. comm., 1968) reported that Pocket Gopher burrows were present quite far up the Sheep River valley, suggesting that this valley may provide an opportunity for the animals to extend their range somewhat to the west.

Burrows were observed along Willow Creek valley at least as far west as a point five miles west of Willow Creek Provincial Park. Near this point, a skull was found buried four feet down in a cutbank. The cranium was badly damaged, but the associated mandibles were well preserved (University of Calgary, Archaeology Colls., No. OS-567).

Three fresh burrows were observed at the Oldman River Recreation Area, on the Coleman-Kananaskis Highway, west of the Livingstone Gap. Evidently they exist farther up the Oldman River valley than was previously supposed. Unlike the other observations, which occurred in Transition Zone forests to Prairies, this observation was made in a Canadian Zone coniferous forest, confirming Soper's suggestion that "fringes of the Canadian Zone" are occupied.

Abundant burrows were observed from five to 10 miles north of the border station at Carway, Alberta, along Highway 2. As this area falls into the void in Soper's map between the ranges of *T. t. talpoides* and *T. t. andersoni,* no subspecific assignment can be suggested. It would be interesting to determine whether or not the two ranges touch, or whether Soper's mapped void remains valid.

Pocket Gophers in western Alberta, presumably referable to the subspecies *T. t. talpoides*, evidently occupy a more complicated and extensive range than has been credited to them by Hall and Kelson (*The mammals of North America.* 1959. Ronald Press, N.Y.) or Soper (*op. cit.*). Areas along the Kananaskis Highway, including areas behind the Rocky Mountain Front Range, may harbour small, marginal populations of this rodent.

The questionable validity of sight records, burrows, and excavated skulls is acknowledged. However, this data may be of value to field zoologists presently working with this species. Soper and others have commented on the range dynamism and spotty distribution of Pocket Gophers. The present note serves to reinforce the statement.

A FREAK MORTALITY OF MEADOW VOLES DUE TO HIGHWAY MAINTENANCE

by **Gordon Koshinsky** and **Margaret Koshinsky,** Saskatoon

On April 19, 1969 an unusual mortality of Meadow Voles *(Microtus pennsylvanicus)* was encountered along Highway No. 11, three to four miles northwest of Kenaston. The animals had perished in an oil strip on the south shoulder of the highway. Consultation with Highways Department crew members doing repairs in the area revealed that the south lane had been oiled at about 7:00 p.m. the previous evening. Gravel had been applied immediately but a narrow oil strip, averaging 20 - 24 inches wide and one-eighth inch or less deep, was left uncovered on the shoulder. The crews had observed the animals dead in this strip upon returning to work 12 hours later.

A count was made of dead animals along a measured mile which comprised most of the mortality area. One hundred and sixty-five individuals were encountered, or an average of one per 32 feet of roadway. Identity was established from a random sample of 10 animals pried from the oil and cleaned in gasoline. Four of the individuals so examined were males; six were females.

The uncultivated right-of-way at this point is approximately 55 feet wide on the north and about 240 feet wide on the south where the C.N. railway parallels the highway. Concentrations of dead voles varied considerably but showed no correlation with cover in this right-of-way. This cover appeared, in any event, to be rather homogeneous, comprising mainly low brome grass and weeds. It is of interest, however, that there was three times the concentration of dead voles where the field north of the right-of-way was summerfallow than where wheat stubble occurred on both sides.

Since repairs were confined to one side of the highway it was impossible to establish if there was any differential in direction of attempted crossings. Apparently all the voles which encountered the oil died. Two had got free within the measured mile but these were dead in the grass within a foot of the oil strip. Their paths were very easy to follow.

While similar road maintenance work had been conducted elsewhere in the immediate area, no evidence of small mammal mortality was found. In some cases gravelling operations covered the oil completely, leaving no oil strip. Probably most significant was the timing of the operation which resulted in the mortality described. Applied at 7:00 p.m., the oil was probably at its stickiest at the peak of vole evening activity. At the time of examination 17 hours later the oil had "set" sufficiently that it would easily have supported animals of this size.

Thanks are extended to Dr. R. D. Morris who confirmed the identification and sexed the individuals in the sample.

RECENT ALBERTA POCKET MOUSE RECORDS

by **Hugh C. Smith,** Provincial Museum and Archives of Alberta, Edmonton

In the list of Alberta mammals several are classified as belonging to the Upper Sonoran Life Zone. Included among these are the Olive-backed Pocket Mouse *(Perognathus fasciatus)* (Soper, 1964:39).

The first Alberta records of the Pocket Mouse were obtained in 1951 from extreme southeastern Alberta (Moore, 1952:143). Soper (*op. cit.*: 175) outlined the northern limit of their range as lying between the Red Deer River and the South Saskatchewan River from Empress on the east to Brooks on the west. Since the earlier work done by Moore there have been no published records for this province. This note is written in order to provide a record of recent specimens collected by museum staff (see Table 1).

Table 1. Recent Alberta Pocket Mouse specimens

Locality	Date	Number	Collector
Manyberries	20 June 1967	4	R. D. Carson & J. Keizer
Hilda	11 June 1969	1	M. J. Hampson & H. C. Smith
Empress	24 June 1969	2	M. J. Hampson & H. C. Smith
Empress	25 June 1969	2	M. J. Hampson & H. C. Smith
Hilda	26 June 1969	3	M. J. Hampson & H. C. Smith

Nero (1958), who has done considerable work on these rodents in Saskatchewan, found them in a large number of localities in that province, extending their range as far north as Saskatoon. A similar intensive study in Alberta might yield interesting results.

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Moore, J. G. 1952. Notes on three additions to the rodent fauna of Alberta. Can. Field-Nat., 66:142-143.

Nero, R. W. 1958. Additional Pocket Mouse records. Blue Jay, 16: 176-179.

Soper, J. D. 1964. The mammals of Alberta. The Queen's Printer, Edmonton.

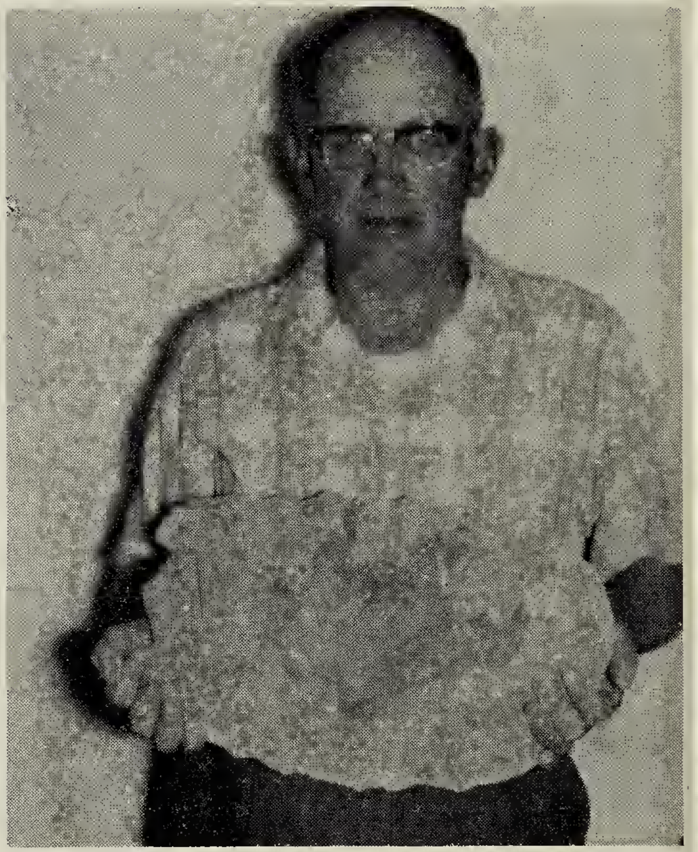
FOSSIL LEAF

by **W. A. Gordon,** University of Saskatchewan, Regina

Between sixty and seventy million years ago, a forested, warm temperate, freshwater swamp covered southern Saskatchewan and the adjoining parts of North Dakota and Montana. The specimen in the photograph provides part of the evidence for that swamp.

The specimen is believed to have been picked up from a lignite strip mining operation in North Dakota in 1968. It probably came from a mixed series of Paleocene age sands, clays, and lignite beds which in North Dakota are known as the Fort Union group and in Saskatchewan as the Ravenscrag Formation. These rocks are the principal commercial source of lignite in the Estevan area and in North Dakota. Fossils which have been found in these beds include crocodiles, crocodile-like reptiles, and turtles, as well as a variety of freshwater snails. A large flora is known, including alder, ash, cedar, elm, dogwood, fig, magnolia, oak, sequoia, sycamore, and walnut. The specimen in question is a large, fairly complete, sycamore-like leaf.

The forests and swamps of Ravenscrag (Fort Union) time were brought to an end by a gentle uplift of the plains region during the Eocene. This brought about a period of erosion instead of deposition. This is shown by the fact that later sediments in the area rest upon Ravenscrag (Fort Union) beds in an unconformable manner.



Theodore J. Binek, of Dickinson, North Dakota holding a fossil sycamore leaf.

Junior Naturalists

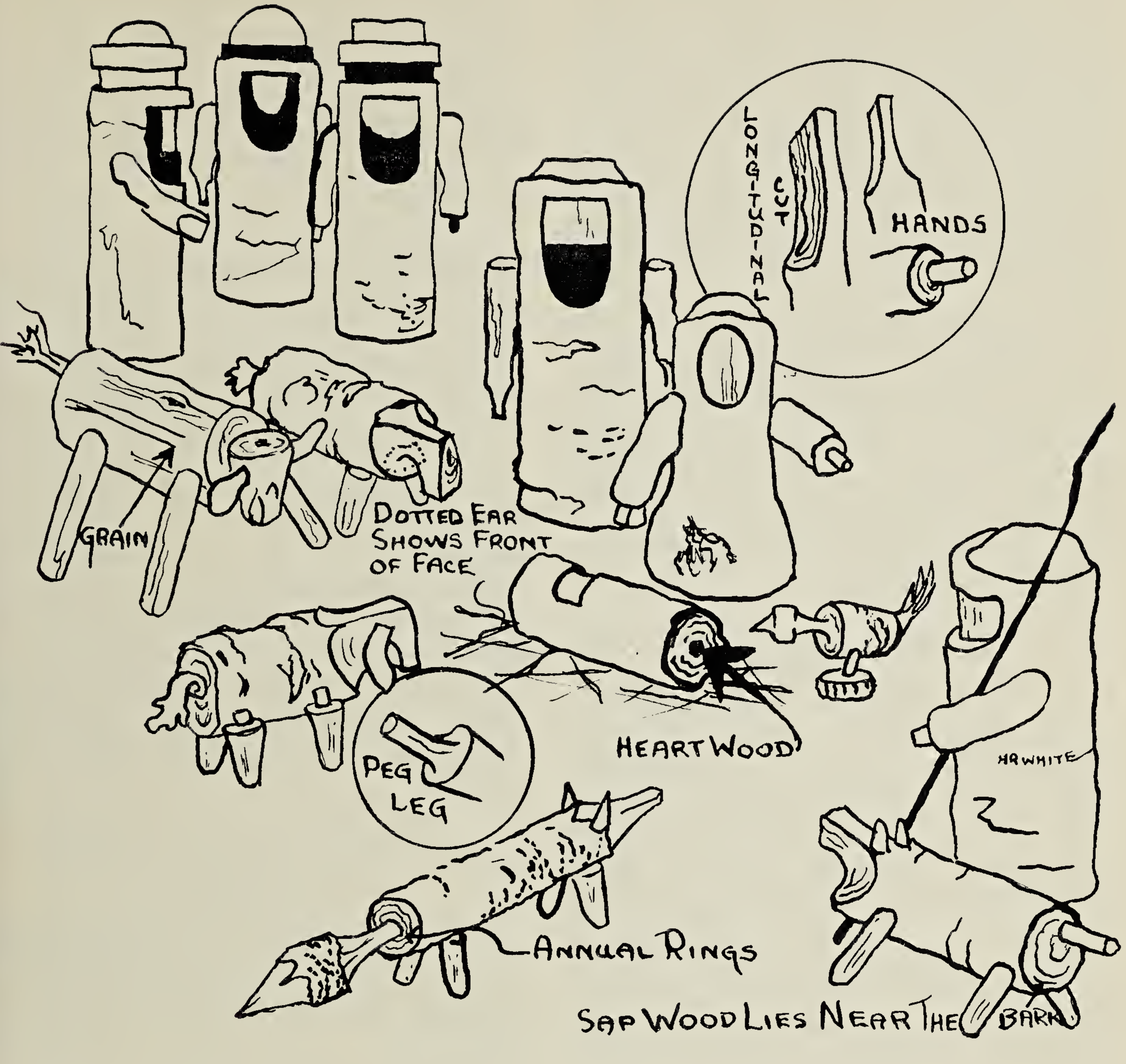
Edited by **Joyce Deutscher,** 7200 6th Ave., Regina

NATURE HOBBIES

by **Helene White,** Red Deer, Alberta

Here is an interesting hobby to wile away the long winter hours—make a collection of little people and animals to display different kinds of wood. The miniature men and animals shown in the illustration are less than three inches tall, but if you are making these wood carvings as toys for little children, you may want to make them somewhat larger.

The easiest figure to start with is the Christ Child lying in the manger hay. To make this figure, saw the wood to the length desired, then mark the face and cut down to the wood, removing the bark. The beardless shepherd boy with his crook is made in the same way, with arms glued on. For an easier fit, a longitudinal cut at the top of the arm (as shown in the inset) will help. To have hands, make two of these cuts (see illustra-



tion), or cut around the twig arm and peel off the bark (also as shown). The bearded men are just about as easy. For the beard, shave off the top layer of bark only, leaving the dark fibrous growth underneath, then proceed with the face.

All the animals and the birds have "peg" legs set into the bodies as illustrated. With the tip of your penknife gouge out the holes, then glue in the pegs. Ears and tails are either scraps of bark glued on, or wood chips left over from your whittling. The calf's tail is a strip of wood "feathered" at the end, while his head is a slice of wood whittled into a cork-like shape and glued on. The fox and his tail are all one piece.

Do try to find as many different kinds of wood as possible and place a label on the underside of each carving giving the name and place found. My sheep are papery white birch, while the fox is the young red-barked growth of the same tree. The shepherd boy is unpeeled poplar as is Mary, but her bell-shaped skirt is the result of a gall swelling. The calf is made of a poplar branch, peeled to expose the grain of the wood. This manner of showing the bark, the grain and colour of the wood, and an abnormality is novel and makes your collection interesting. Carving native animals such as the bear, deer, moose and elk in this way would certainly add further interest.

With the exception of the elk, all these animals live on a quarter section of land we bought this summer near Rochester, Alberta. Here one can still hear the lonely cry of the loon; birds beyond number live in the willows that grow along the tiny stream; poplar and birch border the creek bank and beaver pond, jackpine and spruce flourish in the muskeg. And they will always be there, for it is now a sanctuary, a gift to our wild friends, in appreciation of all they have taught us.

Another year has passed us by and it is time once again to wish you one and all a very Merry Christmas. This year I would like to send extra special greetings to the Saskatoon Junior Natural History Society for their aid to our feathered friends, and to the wonderful, friendly people of Rochester, Alberta.

A STRANGE BIRD

by **Dwight Hayes**, age 10, Torch River

On September 18 while I was digging potatoes, I heard a strange bird call in the sunflowers. When I went over to look, I saw a large grey bird with black wings and a long black tail. I looked in my bird manual and wondered whether it might be a Clark's Nutcracker, although this friendly bird is not often found in Saskatchewan. The bird was also seen eating beside a pair of Blue Jays.

EDITOR'S NOTE: In general appearance, the Clark's Nutcracker and the Gray Jay are very similar, and of course the Gray Jay would be a common species in the woods at Torch River. Could Dwight's bird have been a Gray Jay?

BIRD HOUSE PROJECT STARTED

by **Brian Scott**, age 14, Indian Head

This year I started building bird houses. In March I built eleven and put them up within a mile of our farm in early April. I set out the House Wren boxes in trees and the Tree Swallow houses on fence posts. House Sparrows nested in three houses around the yard. Only two boxes were unoccupied. I had three nests of Tree Swallows with seven young in each. My brother Lorne banded the young. House Wrens occupied three nests. I plan on building more nests this winter.

LETTERS FROM JUNIORS WELCOMED

Please send your observations about nature to Mrs. Joyce Deutscher, 7200 6th Ave., Regina. Your observations, suggestions and comments are always welcome.

Letters and Notes

BARN SWALLOWS

I would like to report a pair of freeloaders that I saw riding on the Saskatchewan Department of Highways ferry at the Lancer Crossing on the South Saskatchewan River on August 21, 1969.

A pair of Barn Swallows had constructed a nest on top of a light reflector in a little shelter on the upstream side of the ferry. The ferryman told me they had brought off one brood of young and were incubating a second batch of eggs, which he was glad to see.—*Clifford A. Matthews*, Saskatoon.

AVIAN TELEGRAPH LINE

Often during the nesting season the territory of a pair of birds will be invaded by a bird watcher who causes them to express their disapproval in a vociferous manner.

On July 5, 1969, while birding on one of the many nature trails in B.C.'s Manning Park, Park Naturalist Andrew Harcombe and I came upon the territory of a pair of Wilson's Warblers. As soon as they noticed us, they began sounding their familiar monosyllabic "check" note in rapid succession. This resulted in the following birds appearing: Mountain Chickadee

(number undetermined), Golden-crowned Kinglet (number undetermined), Gray Jay (four adults), Rufous Hummingbird (one female), Song Sparrow (two adults, one juvenile), Swainson's Thrush (one adult), Townsend's Warbler (one male).

Whether these birds appeared in response to the alarm or whether they were motivated by curiosity, it would seem that birds are provided with an excellent communications network, especially when danger is imminent.—*Al Grass*, Manning Park, B.C.

WILDERNESS PRESERVED!

The photo used in the September, 1969 issue of the *Blue Jay* to illustrate the article "The Tonic of Wilderness" by Margaret Belcher was a poor choice. I cannot conceive of the Cypress Hills Provincial Park as "wilderness preserved." Ranching, cottage subdivisions, power lines, dense facility-oriented recreational activitities and black-topped roads are all to be found in very close proximity to the area illustrated. Indeed cattle grazing occurs within the area and the beaver pond has been destroyed, seemingly because it threatened to flood the adjacent road. Wilderness preserved?

The editor of the *Blue Jay* has done a disservice to the wilderness concept with this questionable photograph. Canada is still rampant with sceptics who say "who needs wilderness, it's all around us?" The use of a marginal illustration such as the one shown only gives visual evidence of the confusion in the wilderness advocate's mind. If we cannot maintain a high degree of accuracy (and honesty) in photography intended to show a specific type of landscape, is it little wonder that we have formidable hurdles to surmount in protecting wild land and relatively unique landscapes, as well as educating the public at large as to the value of these areas?

A second criticism I have of the Cypress Hills area illustrated and the caption used is that it may soon undergo fundamental landscape change. A recreational reservoir has been proposed to occupy the Belanger Creek Valley. Is a third artificial lake justified in this area? Can the planners sacrifice this scenically attractive area of the Cypress Hills Park in an area already highly concentrated with facilities - oriented recreation? What are the implications for flora and fauna? Will the public have the opportunity to put its views?

The area illustrated is less than "wilderness preserved" now but what claim will it have to being even a "wild" or protected landscape should the proposed development be undertaken?—*Robert C. Scace*, Department of Geography, University of Calgary.

BIG ROBIN MIGRATION IN FALL OF 1969

I am writing to you about the large number of robins that have appeared in Prince Albert this fall. Local robins seemed to leave Prince Albert at the end of August, and until late September there seemed to be no birds left. Then, on September 28, I noticed several robins again, and on the 29th and 30th there were robins everywhere. Now (October 5) there are hundreds, even thousands, of them, flying everywhere as if in a hurry to hunt food. When they first arrived, they seemed starved, and hungrily cleaned off the berries of our two mountain ash trees. In the past 22 years that I have lived in P.A. I have never seen anything like this—robins in such large numbers that it reminds you of the robins migrating along the B.C. coast.

These are presumably northern robins on their way south, stopping for rest and food. At the rate that they are eating up all the mountain ash berries and crabapples, I wonder what there will be for the Bohemian Waxwings if they come in their usual numbers to Prince Albert this winter. There are no saskatoons, chokecherries or cranberries, as the blossoms froze in the spring.—*Auguste Viala*, Prince Albert.

The Blue Jay Bookshelf

SASKATOON WETLANDS SEMINAR. 1969. Canadian Wildlife Service report series No. 6. Queen's Printer, Ottawa. $5.25.

This publication is a collection of scientific papers presented in February 1967 at a seminar on small water areas in the prairie pothole region, held to mark the opening of the Prairie Migratory Bird Research Centre in Saskatoon. It contains a fund of information on the values of the wetlands and the problems associated with their preservation, the characteristics of these areas and of waterfowl populations, and the methods of obtaining data on waterfowl. The need for further research, from a standpoint of the total environment, with the aim of seeking a balance for waterfowl, grain production, and recreation, is outlined.

The ten million natural depressions in the Canadian prairies are essential for the maintenance of a North American population of 60 - 100 million breeding ducks — the goal of the International Migratory Bird Committee. But because of a conflict of interests, the policies of various government agencies may support or act in opposition to this aim. For example, farmers striving for greater economic returns from their land have been draining potholes for agricultural use, with government financial assistance. On the other hand, government funds for building water storage areas are available to farmers who agree to refrain from draining wetlands, and for long-term lease of large marshes for wildlife and recreation. In spite of the recognition of the need for economic efficiency, the consensus of the participants at the seminar was that as much as possible of the wetlands should be preserved. The reasons included prevention of unstable ecological conditions, maintenance of a diversified, pleasing environment, and provision for an expected increase in recreational pursuits (natural history observing, camping, photography, etc.) Studies of small water areas have been mainly for the purpose of providing a marketable surplus of waterfowl, but the hunter is not the only one to benefit.

The book illustrates the work being done by government agencies, universities, and organizations such as Ducks Unlimited to understand the dynamics of waterfowl populations. Factors affecting water levels in sloughs, types of vegetation characteristic of sloughs of different degrees of permanency, and the characteristics of those potholes which are most attractive to ducks, have been investigated. In order to predict a fall flight size, measures of breeding success are more valuable than spring census figures, and emphasis is being placed on the study of specific aspects of waterfowl ecology such as the effect of crowding on productivity, and what size and quality of water area a particular species of duck requires to produce the maximum number of young.

Unfortunately, this interesting information is presented in terms which are perhaps too scientific for the general public, and there is considerable repetition throughout the book which makes it unsuitable as a reference. Also, because so much similar research data are given, the reading becames, in places, rather tedious. The book should prove useful, however, for biologists and hydrologists working in the field of waterfowl conservation, and interesting to anyone concerned about the future fate of our duck population. It would seem even more valuable if the information, gleaned from the knowledge and experience of the seminar participants, could be published in the form of a manual on small water areas. It might serve to encourage the study and enjoyment of the wetland habitat by the general public, and enlist their support now in preserving our natural water areas.—*Nora Stewart*, Regina.

SUGGESTIONS FROM THE BLUE JAY BOOKSHOP

Note: Send orders to Blue Jay Bookshop, Box 1121, Regina, Sask. Saskatchewan residents please add 5% tax.

All prices subject to change without notice.

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Atlantic Coast to the islands of the Pacific and the tundra of Alaska lie hundreds of national wildlife refuges, preserving an unspoiled national heritage and opening up new horizons to naturalists and others. A magnificently illustrated volume — 250 photographs in colour and monochrome. **$26.50**

OUR THREATENED WILDLIFE: An Ecological Study, by William Perry. This book discusses in a clear and precise manner the historical and modern situation of our wildlife and what can be done to save it. (Ages 12-16.) **$5.15**

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ROCK AND MINERAL COLLECTING IN CANADA by Ann P. Sabina. Vol. 1 Yukon, N.W.T., B.C., Alberta, Sask., Manitoba. Along with a useful introduction covering many phases of rock collecting, the author includes descriptions of areas in the west and the likely minerals to be found there, as well as a handy bibliography and list of Canadian clubs. Paper **$1.30.**

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BADGERS AT MY WINDOW by Phil Drabble. The author has been absorbed by badgers for years and has reared badger cubs. Over a long period of time he has grown to know their habits and to develop friendships with these shy wild animals. **$6.00**

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WONDERS OF THE BAT WORLD by Sigmund A. Lavine. Despite numerous superstitious fancies the bat is one of man's best friends. Its beneficial habits are stressed in this lively summary of what we have learned about this flying mammal, including the sonar system. 64 pp., ages 8-12. **$3.95**

THE WORLD OF THE AMERICAN ELK by Joe Van Wormer. In this delightful and informative book the author examines the elk in all aspects in all four seasons, illustrating his anecdotes with magnificent photographs. **$7.25**

THE WORLD OF THE BISON by Ed Park. Towering above lesser animals in melancholy splendour and indestructible nobility stands the bison—the buffalo. With words and extraordinary photographs Ed Park allows the reader to follow the shaggy bison through their migrations in spring and fall, through summer days and the onslaught of winter. **$7.25**

SNHS ANNUAL AWARDS

CLIFF SHAW AWARD 1969

By decision of the Board of Directors The Cliff Shaw Award is being continued beyond the minimal 10 years of the original term. This award is given to the contributor judged by the Editor to have made the most significant contribution to the *Blue Jay* during the preceding year.

The 1969 award was made to **John Lane** of Brandon, Manitoba, by Dr. George Ledingham, Editor of the *Blue Jay*, for the article on hybridism in the Mountain and Eastern bluebirds that was printed in the March, 1969 *Blue Jay*. This article was a valuable original contribution, recording the first example of hybridism in the thrush family in North America. In addition, it was recognized that a number of other recent contributions to the *Blue Jay* were indirectly inspired by John Lane, the originator of the bluebird trail at Brandon, for his idea has been taken up at Indian Head by Lorne Scott, and more recently at Saskatoon by the junior naturalists of the local society there.

SNHS CONSERVATION AWARD 1969

The Conservation Award given annually by the Saskatchewan Natural History Society recognizes an outstanding contribution to conservation in Saskatchewan. This year the award was made to **Lorne Scott,** a young staff member of the Saskatchewan Museum of Natural History. Lorne was recognized for his conservation education activities in the Museum, for his dedicated interest in young people and their projects, and for his work on the Indian Head Bluebird Trail. In making the presentation, retiring President, Mr. W. A. Brownlee, said that natural history was both Lorne's long-time hobby and his current occupation.

The bluebird nest box project started by Lorne at Indian Head in 1963 now has 750 nest boxes. Lorne's project was inspired by John Lane and his group of junior naturalists at Brandon, and Lorne in turn is now giving encouragement to another group of juniors in Saskatoon, who hope to extend their nest box trail to meet Lorne's.

Cliff Shaw Award winner, John Lane, with members of the Brandon Junior Birders' Club.

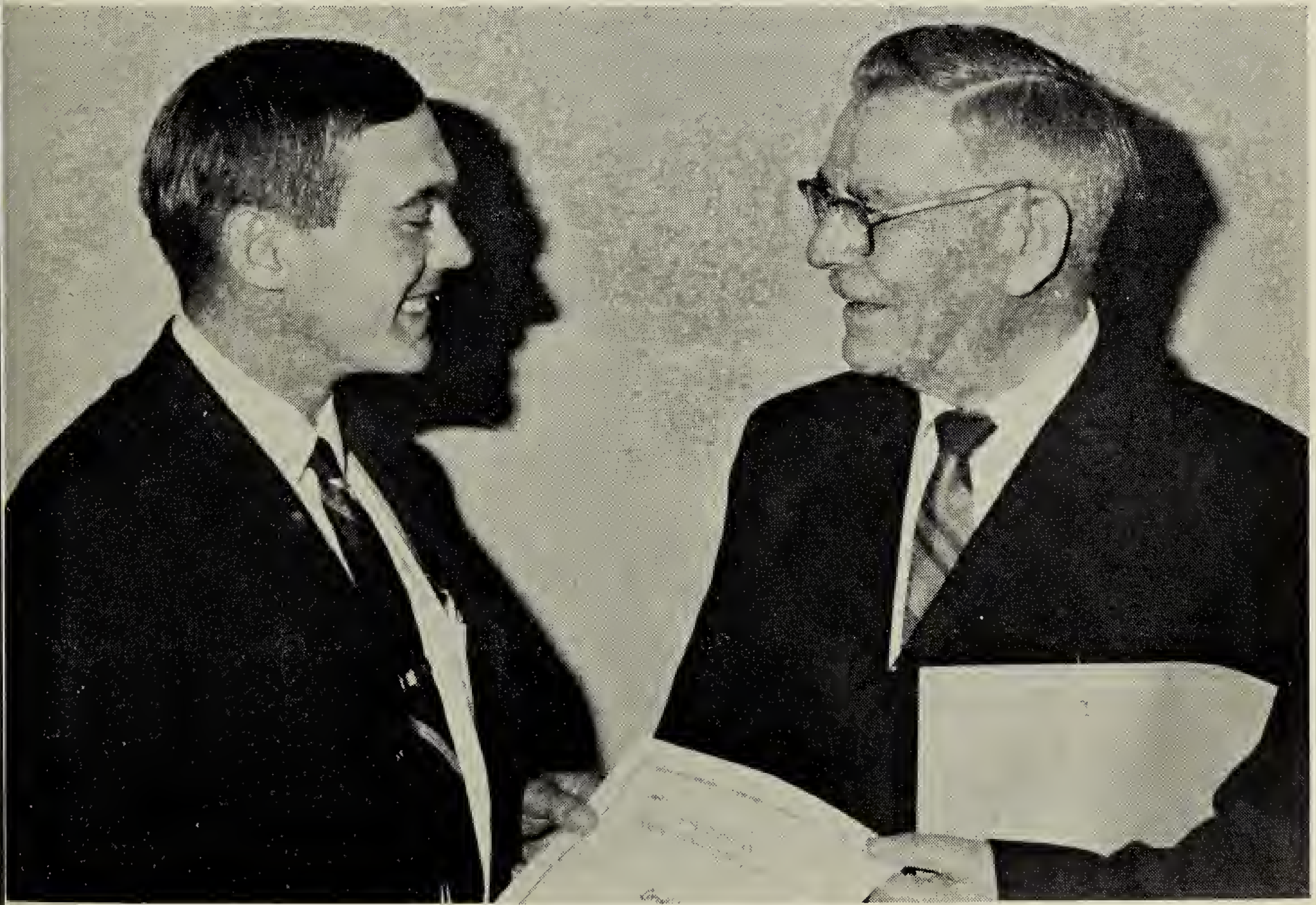

Photo by Gary Seib

Conservation Award winner, Lorne Scott, and retiring president W. A. Brownlee

SNHS Resolutions, October 18, 1969

1. Whereas the government of Ontario has acted wisely to place a ban, with some exceptions, on the use of DDT in that province, and
   Whereas this action was a very courageous one for that government in view of the quantities of agricultural pesticides used in the province and the consequent pressure on the Government of Ontario to continue to permit the use of DDT,

   BE IT RESOLVED that the Saskatchewan Natural History Society send our congratulations and expression of appreciation to the Government of Ontario for its recent action in this regard.

2. Whereas DDT has been clearly implicated in the decline of several species of birds, and
   Whereas the use of DDT has been shown to have detrimental effects on the fishing industry of Eastern Canada, and
   Whereas the long range effects of the present DDT intake on human biology is unknown and perhaps detrimental, and
   Whereas various governments and agencies are becoming increasingly aware of the detrimental effects of non-biodegradeable pesticides and are taking or have taken action to ban its use, therefore

   BE IT RESOLVED that the Saskatchewan Natural History Society form a committee to assemble documentation concerning the adverse effects of DDT and other non-biodegradeable pesticides in our environment and present this documentation to the Government of Saskatchewan and to the Government of Canada with a request that these governments ban the use of DDT and other non-biogradeable pesticides within their jurisdiction.

3. Whereas the Blue Jay Bookshop is a major source of income to our Society while providing a real service to its members,

   BE IT RESOLVED that Frank Brazier receive our hearty thanks for his continued time-consuming and dedicated effort on our behalf.
4. BE IT RESOLVED that the Saskatchewan Natural History Society extend congratulations to the R.M. of Torch River for showing genuine concern for the preservation of Kelsey Lake.

5. Whereas Kelsey Lake is a shallow marsh supporting bird and animal life of value to the people in the area, and
   Whereas the lake is of value for flood control and the maintenance of ground water,

   BE IT RESOLVED that the Government of Saskatchewan be asked to preserve this area.

6. Whereas the Saskatchewan Natural History Society had a successful summer meeting in June 1969 in the beautiful grasslands of the Val Marie country, where the characteristic flora and fauna of the river breaks and hills were studied with great interest by members from parts of the province unfamiliar with this distinctive habitat, and
   Whereas several unusual species of flora and fauna were recorded including the *Oxytropis besseyi* and the Violet-green Swallow (see *Blue Jay*, 27:144-45, for the first nesting record for the province), and
   Whereas the Society at this time formally unveiled the prairie stone cairn marking its Prairie Dog Sanctuary, where protection is offered to this unique wildlife species under arrangements made possible by the co-operation of the Department of Natural Resources, and

Whereas the Society was honoured by the presence at the meeting of the M.L.A. for Shaunavon, the Honorable F. Larochelle, who spoke for the Government in the unveiling of the cairn, and

Whereas we were reminded on this gratifying and pleasant official occasion of the co-operation which has existed between our Society and the Department of Natural Resources in mutual concern for the protection of grassland species,

BE IT RESOLVED that an expression of thanks be made to the Government of Saskatchewan for their co-operation in bringing this sanctuary into being, and

BE IT FURTHER RESOLVED that the Government of Saskatchewan be urged to give all possible support to the proposed creation of a park preserving that remarkably interesting portion of our grasslands in the Southwest.

7. Whereas the indiscriminate and wholesale clearing of some areas designated as Community Pastures has many detrimental effects, including the following:

    a) destroys the ecological balance of the whole area

    b) has been detrimental to the wildlife and general appearance of the area

    c) accentuates the flooding problem in adjacent areas

    d) destroys natural shelter for cattle

    BE IT RESOLVED that before any such clearing is proceeded with by P.F.R.A. or other government agencies a study be made so that a percentage of tree growth remains undisturbed, after giving due consideration to such factors as location, soil fertility, scenic, aesthetic and wildlife values, and providing natural shelter for the cattle.

8. Whereas the Regina Waterfowl Park is being encroached upon by the developing city, and
    Whereas this unique waterfowl area within the city limits is of inestimable value to the city and the university, therefore

    BE IT RESOLVED that the City of Regina, the Wascana Center Authority and the Canadian Wildlife Service be asked to extend the Sanctuary to include the marsh area east of the bypass.

9. Whereas the new Condie Nature Interpretative Center combines the preservation of valuable marsh habitat with enlightened and indeed inspired conservation education with at the same time potential as a major tourist attraction, therefore

    BE IT RESOLVED that the Government of Saskatchewan and its Department of Natural Resources be commended for providing this important facility. In particular we would like to commend Mr. Fred Bard, Director of the Saskatchewan Museum of Natural History, for his foresight and leadership in making this centre a reality.

10. Whereas the proposed Indian Lake hydro development in Manitoba would have interfered with the livelihood of the local Indian population, would have been detrimental to the preservation of invaluable flora and fauna in the region and would have destroyed one of the finest tourist attractions in the Province of Manitoba, therefore

    BE IT RESOLVED that the Government of Manitoba be commended for discontinuing action on this project.

SASKATCHEWAN NATURAL HISTORY SOCIETY

FINANCIAL STATEMENT — YEAR ENDING SEPTEMBER 30, 1969

INCOME			
Memberships (including sales of *Blue Jay*)			$4,949.98
Spec. Pub. no. 1 — Guide to Sask. Mammals		$ 76.96	
Spec. Pub. no. 2 — Birds of the Sask. River		45.59	
Spec. Pub. no. 3 — Birds of Regina		32.05	
Spec. Pub. no. 4 — Blue Jay Index		12.00	
Spec. Pub. no. 5 — Birds of Lake Athabasca		47.76	
Spec. Pub. no. 6 — Birds of northeastern Sask.		72.60	
Publication — Birds of the Elbow		6.54	
		293.50	
Sales (*Blue Jay* Bookshop)	3,160.05		
Less costs of sales	2,484.32		
Less 25% of net profit	168.93	506.80	
Donations (general)		51.70	
Annual meeting (net)		61.00	
Summer meeting (net)		91.85	
Interest (bank accounts and bonds		156.94	1,161.79
			$6,111.68
EXPENSE			
Printing of Blue Jay (4 issues)		$5,603.34	
Newsletter (printing and postage)		518.91	
Welcome notes and special invoices		118.24	
Project: Nest information cards		76.44	
Honorarium re: S.N.H.S. bookkeeping		100.00	
Office rental and lights (13 months)		512.01	
Postage		466.81	
Office supplies and stationery		240.08	
Bank charges less U.S. premium		65.36	
Affiliation fees		45.00	
Miscellaneous office and admin. expense		41.07	7,787.26
EXCESS OF EXPENSES OVER INCOME			$1,675.58

Statement of Assets and Liabilities as at September 30, 1969

ASSETS			
Cash on hand			$ 40.00
Cash in bank (current)			925.87
Cash in bank (savings)			4,661.87
Government of Canada bonds			300.00
Stock on hand			730.66
Accounts receivable			290.06
Deposits with Postal Dept. and Sask. Power			71.77
Publication subsidy re: Hours and the birds			
Balance as at September 30, 1968		$2,732.63	
Less: Royalty for year ending June 30, 1969	$ 110.58		
Profit on copies sold locally	62.22	172.80	2,559.83
			$9,580.06
LIABILITIES			
Trust Fund re: Refuge and Sanctuary			
Balance as at September 30, 1968	$1,496.65		
Plus donations during past year	383.85	$1,880.60	
Less: Cost of cairn at Val Marie and signs at Nipawin		114.11	1,766.49
Owing re: Honorarium for Bookshop			68.93
			1,835.42
NET WORTH			
Balance as at September 30, 1968	$8,958.84		
Plus adj. re: honoraria 1966-68	461.38	9,420.22	
Decrease for year ending Sept. 30, 1969		1,675.58	7,744.64
			$9,580.06

THE SASKATCHEWAN NATURAL HISTORY SOCIETY

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Blue Jay Archives: Gary Seib, 1928 Robinson Street, Regina; **Blue Jay Bookshop:** Frank Brazier, 2657 Cameron Street, Regina; **Circulation:** Lorne Scott, Saskatchewan Museum of Natural History, Regina; **Conservation:** Doug Whitfield, 1306 Melrose Avenue, Saskatoon; **Editor of Newsletter:** James Slimmon, 2526 Hanover Avenue, Saskatoon; **Local Societies:** James Wedgwood, 610 Leslie Avenue, Saskatoon; **Office Services:** James Jowsey, 2635 Nineteenth Avenue, Regina; **Publicity:** Ruth Shaw, Yorkton; **Special Publications:** C. Stuart Houston, 863 University Drive, Saskatoon; **Youth:** Frank Switzer, 140 Logan Crescent, Yorkton.

THE BLUE JAY

Blue Jay Editors: George F. Ledingham; **Assistant Editors:** Margaret Belcher, Robert W. Nero; **Junior Naturalists:** Joyce Deutscher.

All items for publication should be submitted to George F. Ledingham, Editor, 2335 Athol Street, Regina.

MEMBERSHIPS

The classes of memberships in the Saskatchewan Natural History Society are as follows: *Regular*, $3.00; *Supporting*, $5.00; *Sustaining*, $10.00. The *Blue Jay* and *Newsletter* are sent without charge to all members not in arrears of dues.

Send all renewals and new memberships to James Jowsey, SNHS, P.O. Box 1121, Regina.

REPRINTS

Requests for quantities of reprints of any article printed in the *Blue Jay* should be sent to Printcraft Ltd., Regina, Sask., within one month of publication. Contributors wishing a few extra copies of the current *Blue Jay* may get them at cost. Requests for these should be made to the Editor when material is submitted for publication.

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